

**COOPERATION IN
GENERAL EDUCATION**

COMMITTEE ON THE COOPERATIVE STUDY
IN GENERAL EDUCATION

Appointed by the American Council on Education

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The Cooperative Study in General Education

COOPERATION IN GENERAL EDUCATION

A FINAL REPORT OF
THE EXECUTIVE COMMITTEE
OF THE COOPERATIVE STUDY
IN GENERAL EDUCATION

AMERICAN COUNCIL ON EDUCATION
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Foreword

THE COOPERATIVE STUDY in General Education, which functioned from January 1939 until September 1944, grew out of the interest of a number of colleges in improving their programs in general education. Some of these institutions had long been at work on this problem; others were merely beginning their efforts in this field. All these schools believed, however, that they would greatly benefit from a cooperative attack on many of the problems they faced. They felt that despite differences among colleges, certain basic problems were sufficiently similar to make concerted action profitable. They believed that the sharing of experiences, the systematic exchange of material and ideas, and division of labor in attacking certain complex problems would make possible greater progress. Cooperation would also enable them to obtain for their faculty members the services of consultants and facilities beyond those they could normally provide.

Representatives of these colleges, convinced that the cooperative program was entirely feasible and desirable, sought the assistance of the American Council on Education in developing an organization of this sort. Since visits by the representatives of the Council to a number of institutions revealed an active interest in a cooperative undertaking, plans for the organization of the Study and for its financing were prepared and submitted to the General Education Board in 1938. The Board agreed to support the project for a period of three years, provided that no fewer than fifteen institutions participated and contributed approximately one-half the budget. The American Council on Education officially accepted the responsibility of sponsoring the Study and appointed an executive committee which selected the participating colleges and assumed general responsibility for its policy and direction.

The Executive Committee first appointed in the summer of 1938 consisted of Chancellor Samuel P. Capen, University of Buffalo; Dean Lloyd C. Emmons, Michigan State College; President L. A.

Pittenger, Ball State Teachers College; President William P. Tolley, Allegheny College; Dean George A. Works, University of Chicago, chairman. Shortly thereafter Chancellor Capen resigned from the committee because of ill health, and later President Pittenger and Dean Works retired. The membership of the committee throughout most of the Study was Dean Lloyd C. Emmons, Michigan State College; Dean B. Lamar Johnson, Stephens College; Dean Earl J. McGrath, State University of Iowa; and Chancellor William P. Tolley, now of Syracuse University, chairman.

In selecting colleges to participate, the Executive Committee used several criteria. It sought institutions which had already undertaken some form of educational experiment and which possessed institutional and administrative leadership which would guarantee the colleges' active participation in the work. It also chose colleges which understood the opportunities and obligations involved in participation and which represented a fairly complete cross section of American higher education. This last criterion is particularly important in understanding the nature of the Study, for in the group finally selected the following types of institutions were represented: the land-grant college, the municipal university, the state teachers college, the independent liberal arts college, the Catholic college, the Protestant church-related college, the Negro college, the four-year college for women, the junior college for women, and the coeducational junior college. While the heaviest geographical grouping fell in the Middle West, the colleges were scattered from Pennsylvania to California and from Minnesota to Alabama. The twenty-two colleges originally participating in the Study were the following: Allegheny College, Antioch College, Ball State Teachers College, Bethany College, University of Denver, Hendrix College, Hiram College, Hope College, Iowa State College, Little Rock Junior College, University of Louisville, Michigan State College, Mills College, Muskingum College, Northwest Missouri State Teachers College, Olivet College, Park College, Pasadena Junior College, College of St. Catherine, Stephens College, Talladega College, and the College of Wooster. During the course of the Study the following colleges withdrew: Bethany College, University of Denver, Hiram College, Hope Col-

lege, Mills College, Olivet College, and the College of Wooster. The following colleges not originally members of the Study joined it: Centre College of Kentucky, Fisk University, and Macalester College.

To assist in the undertaking, the central office was organized at Chicago and a central staff was selected. Ralph W. Tyler was chosen as director, and Ralph W. Ogan as associate director. Because some of the colleges were organized on the so-called "divisional" basis, the members of the staff were selected and its work was organized along divisional lines. In addition to the director and associate director, one or more staff members were chosen in the humanities, the sciences, the social sciences, and student personnel and counseling.

Each participating college appointed a representative to direct the activity of the Study in that college and to represent the college in general planning sessions. Major administrative responsibility for directing the work of the Study in that institution thus fell upon this representative, who also acted as liaison officer between his college and the members of the central staff.

By common agreement the primary purpose of the Study was to effect desirable changes in educational practice. The Study was not intended merely to survey what was being done or what could be done, though these problems were naturally important. The concern of the Study was to be with what *ought* to be done and how it could be effected.

Another major purpose of the Study was to discover and develop leaders in the various faculties who would gain a broader and more realistic perspective of the problems of general education, and who would be capable of putting into operation the programs developed under their leadership. That there is a shortage of persons prepared to assume such responsibility was recognized. It was hoped that one of the significant outcomes of the Study would be the encouragement of faculty members of ability within the cooperating institutions to view the institutional program as a whole and to take active part in its continuous improvement.

A third purpose was to provide opportunity for interchange among institutions of the results of their experimentation and study

to the end that the results of the Study would be made available to all American institutions of higher education. That this was a primary responsibility of the Study was emphasized by the interest and participation at various points of the program by colleges and universities who were not members of the group.

The procedures developed in the Study for helping to effect desirable changes in educational practice can be understood only in relation to a basic principle of this Study—the complete autonomy of the participating institutions. No “one best” conception of general education, no preconceived idea as to the “most important” question to be studied, nor any dicta as to “the best” method of investigation were to be thrust upon the colleges. The Study was committed to the principle of recognizing differences among the participating colleges and accepting these differences without approval or disapproval. The Study’s hypotheses about general education were to grow out of the different—and sometimes conflicting—views of these colleges. Theories were not to be thrust upon them from some outside source.

According to this principle all responsibility for activity in connection with the Study was explicitly invested in the individual colleges. Each college took exclusive responsibility for determining what it could and should do toward improving its own program of general education. Each also undertook to provide the organization and other resources necessary to produce this improvement. The college, not the central staff of the Study or any other body, was to determine what use if any the college was to make of the Study’s resources or what changes it was to introduce into its own program.

Since the responsibility for local cooperation with the Study was assumed by the colleges, all recognized that the direct value which a college could expect from the Study would result only from the participation of its faculty members. To secure this interest, the Study worked with problems and projects which were of immediate concern to individuals and groups in a particular institution. Since the Study had committed itself to the principle that the problems to be studied should arise out of the experiences and practices of the colleges and not by suggestions from without, the

Study faced the problem of securing some unity of effort without imposing hypotheses and problems for investigation. The only possible procedure seemed to be an exploratory period of some eighteen months during which the efforts of the Study were directed toward the many specific problems with which individual colleges were concerned. During this period the interests of the colleges were canvassed and developed.

In carrying on the work, the Study functioned in a number of ways. Probably the most important of these was the workshop held each summer from 1939 through 1944 at the University of Chicago. During the five weeks of the workshop faculty members from the cooperating colleges and representatives of other institutions interested in general education were free to work on some specific problem of general education which was of interest to them and their institutions. These projects might involve the construction of tests, the organization of courses, the writing of syllabi, the reorganization of curriculum, the development of programs of guidance, or any other work which would improve the educational procedure of the college. At the workshop, a participant found faculty members from other colleges interested in similar problems from whom he could secure advice and criticism for his own work. Members of the staff and additional specialists were available for extensive individual conferences and to lead group seminars. Demonstration classes were sometimes held, and the library and other resources of the University of Chicago and the community were available.

Another working relation of members of the central staff and the colleges was that of the intercollege committee, which was composed of representatives from eight to ten colleges and appropriate members of the central staff. These committees met for three to six days in some convenient place to consider some problem in a subject-matter field such as mathematics or the social sciences, or in an area such as comprehensive examinations. In advance of each meeting members of the central staff arranged proposed agenda. The committee discussed common problems, exchanged experiences, and allocated to individuals for further study and report phases of the problem under consideration.

Similar to the workshop and intercollege committee were the regional conferences held for a few days on some campus and attended by faculty members from neighboring institutions.

On invitation, members of the central staff visited the colleges as consultants. On these visits they gave to individuals and groups technical assistance on local projects, suggesting techniques of fact-finding, interpreting test results, suggesting uses of test results, and the like. In addition they sought to keep the colleges in touch with each other by reporting work carried on by other institutions and by the central staff.

A number of services were provided by the central office of the Study. It circulated to the colleges generally materials which they individually developed: syllabi and tests, handbooks, record and laboratory forms, reprints, books, reports of local studies, and such things. The central office prepared and distributed newsletters, bulletins, digests of material related to studies in colleges, evaluation instruments,¹ materials obtained from other national studies, and the like. The office also provided a test-scoring service.

The General Education Board also provided fellowships for each of the cooperating colleges. A fellowship enabled a member of the faculty to work at the central office for six months on some problem of general education which was particularly important to the institution.

Obviously, these individual projects could not grow into a total program which would have maximum utility for colleges generally. Out of this period emerged a number of crucial problems in which the colleges generally were interested. These problems became the major projects upon which the Study in its second period concentrated approximately one-half its resources.

The four volumes in this final report include the over-all report of the Executive Committee and reports of the major projects carried on in the various fields with the exception of science which was interrupted by the war. They consist of (1) the volume in hand, *Cooperation in General Education*, which is

¹ The several inventories developed by the Cooperative Study in General Education may be obtained from the Cooperative Test Service of the American Council on Education, 15 Amsterdam Ave., New York 23, N.Y.

the report of the Executive Committee, (2) *General Education in the Humanities*, (3) *General Education in the Social Studies*, and (4) *Student Personnel Services in General Education*.

The present volume was outlined by the Executive Committee, and several chapters were prepared by members of the committee. The descriptions of the major projects were taken from the staff reports, and members of the staff also participated in drafting some of the chapters. The volume was, however, reviewed critically by each member of the Executive Committee and reports its views of the significant results of the Study.

RALPH W. TYLER

University of Chicago
August 1946

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**COOPERATION IN
GENERAL EDUCATION**

Factors Influencing the Development of General Education

COLLEGE PROGRAMS have recently undergone much reconstruction. These changes have been motivated mainly by a desire to offer students a broad program of general education geared more closely to their needs than was the college curriculum of the early twentieth century. It is the rare institution indeed which has not re-examined its aims and objectives and reorganized its courses of study with this end in view.

The many programs of general education launched in recent years exhibit the widest variation in aims, in structure, and in content.¹ It is desirable to preserve these institutional differences because the purposes, the students, and the social constituencies served by educational institutions vary considerably. Yet, if American youth of this and succeeding generations are to communicate with one another and act with singleness of purpose in the solution of contemporary problems, they must possess certain common intellectual and cultural traits. It is reasonable to expect, therefore, that although programs of general education may differ in some respects from one institution to another and although one student's course of study may vary somewhat from studies pursued by others, there must be a common element in all programs if cultural and political unity are to be achieved.

Early American Education

The need for a modernized program of general education can be most dramatically portrayed by comparing the functions of the

¹ William J. Haggerty, "Current Issues in General Education," *School Review*, XLVI (1938), 497-514.

high schools and colleges of the nineteenth century with the purposes of these institutions today. As late as the 1850's the percentage of young men and women who received any formal education beyond the elementary school was infinitesimally small. Even in a country dedicated to the principle that widespread dissemination of knowledge among the people is the *sine qua non* of democracy, this limitation of educational opportunity to a small percentage of the population was inevitable. To understand this apparent inconsistency between philosophy and practice, the lives of the people of that day must be considered.

Opinion has varied widely concerning the purposes and content of high school and college education, but educators have generally been in agreement on the basic principle that the schools should provide such instruction as will prepare young people for the activities of life in the world they will enter when they leave the classroom. Indeed, many would hold that the classroom should duplicate the experiences of the outside world. This concept of the purposes of education explains the limited formal general education of the majority of our forefathers. They did not require the broad education needed by Americans today. In 1880 the vast majority of our people lived a relatively simple rustic existence, and even those in cities were not enmeshed in the complexities of contemporary urban life.

The knowledge needed in the common activities of everyday life could be provided in the lower grades. An elementary understanding of language and number, supplemented by moral instruction in the school, the church, and the home, constituted the intellectual and social training essential to an adjustment to the life of that day. In rural communities the specialized training required for participation in the productive work of the family was acquired by taking part in these activities. The boy of ten or twelve who had learned the "three r's" had about as much general education as he needed. He could talk, read, calculate, and think at least on an elementary level. By assisting and observing his father and older brothers in the chores of farm life, he learned to plow, milk, and butcher. From her mother the girl likewise learned her part in the life of the self-contained rural economy. She assisted with the baking, the sewing, and the churning, and even learned

the exacting and burdensome activities of rearing a family by caring for her younger brothers and sisters. The esoteric knowledge of the scholar would have added little to the efficiency of life under these circumstances.

It is true that certain services in the community required a more advanced and specialized type of education than that which could be gained either in the elementary school or by practical experience. Clergymen, lawyers, and doctors acquired the specialized knowledge and mastered the characteristic skills of their professions either through advanced instruction in the secondary schools and colleges, or by self-study and apprenticeship under a successful practitioner. But the percentage of the total population engaged in these occupations was small indeed. Even as late as the 1930's only about one in eight persons gainfully employed in the United States was engaged in a professional or managerial occupation requiring advanced, specialized education.

Since the common body of knowledge required by our people in the late nineteenth and early twentieth centuries could be provided in the elementary school, it is not surprising that high school and college instruction should have been designed to suit the needs of a very small and select group of students, namely prospective members of the professions or managerial occupations. The curriculum of the high school was designed to provide intellectual training basic to college education. College courses had a similar set of narrow objectives. Though not vocationally oriented in a narrow sense—since they consisted primarily of courses in mathematics, the classical languages, and philosophy—they, nevertheless, were intended to serve the needs of a small and select group of students. For all practical purposes it may be said that general education ended somewhere in the upper grades of the elementary school. President Conant has aptly described this situation in the following words:

In the 1880's the high schools and their equivalents—the private academies and preparatory schools—were essentially concerned with a group of young people who were preparing for entrance into college. By and large, throughout the country the enrollment in these schools in the eighties and nineties represented either impecunious youths with high scholastic aptitude and a keen desire for book learning, or children of well-to-do families who for social reasons were bent on having their

offspring acquire a college education. The combination of social motivation of the upper income groups on the one hand, and high scholastic aptitude on the other presented the teachers of that day with a relatively simple problem. In terms of aims and ambitions the student body was relatively homogeneous. What we now call an old-fashioned curriculum enabled the graduates of those schools of the last century to enter college well prepared for further work in modern and ancient languages, in mathematics and in the sciences. For those who could take it the formal instruction was excellent; those who couldn't or wouldn't, dropped by the wayside as a matter of course. From the point of view of those on the receiving end—the professors in the colleges—this was a highly satisfactory situation. What sort of education the rest of the 14-18-year-olds received was none of their affair!²

Population Changes

The general education offered in the elementary school is no longer adequate for American youth. But the high schools and colleges have not made an extended program of general education available to the millions of students who now attend these institutions. The colleges, and to a lesser extent the high schools, continue to serve the needs of a selected group of students which now constitute only a fraction of the total student population. A review of the forces responsible for the changing character of the student body in the high schools and colleges will suggest the types of curriculum changes required to adapt the educational program to a new student population. The changing percentage of our population in various age brackets is one of the most significant of these factors. In 1790 there were in this country approximately two children below the age of sixteen for every adult over twenty. By 1930 there was less than one child for every adult. These figures show that America is increasingly becoming a land of adults. As the number of dependents which must be supported by each adult decreases, it becomes possible for the average parent to delay the date at which his children must discontinue their schooling and enter upon a gainful occupation. This biological phenomenon has caused increasing numbers of children especially in the low-income groups to continue their education beyond the elementary school.

² James Bryant Conant, "A Truce among Educators," *Teachers College Record*, XLVI (1944), 159.

That this process of extending the education of the children of low-income groups has not yet reached a sufficiently large proportion of our population is clear from the results of studies made in several states. In Minnesota, for example, in one of the years just prior to America's entry into the war only half of the students who stood in the upper tenth of their high school graduating classes continued their education in an institution of higher learning. Similar studies made in Ohio³ and Kentucky⁴ confirm the findings in Minnesota. It is abundantly clear, therefore, that tens of thousands of high school graduates who are potentially capable of rendering the highest service to society are still denied the opportunity of systematic education beyond the high school.

This socially undesirable situation was temporarily improved through the inauguration of the various college programs of the military services. Through the Army Specialized Training Program and the Navy V-12 program several hundred thousand boys were selected for college education. These selections were made on a competitive scholastic basis without respect to the social or economic condition of the students' families. It may safely be inferred, therefore, that as a result of the war thousands of young men of high scholastic ability who, under normal circumstances, would have gone to work immediately after graduation from high school have now obtained at least part of a college education. It is impossible at this moment to say whether the various states or the federal government will establish a comparable competitive-scholarship system designed to provide higher education for young men and women from impecunious families. It is quite likely, however, that a number of states will launch programs of student aid. Public Law 346, commonly referred to as the GI Bill of Rights, already provides this type of educational opportunity at government expense for veterans of this war.

It seems likely that the postwar student population in colleges and universities will be considerably augmented by students of

³ Herbert A. Toops, "Improving Selection at the Secondary School Level," *Current Issues in Higher Education* (Chicago: University of Chicago Press, 1937), pp. 83-84.

⁴ Horace Leonard Davis, "The Utilization of Potential College Ability Found in the June, 1940, Graduates of Kentucky High Schools," *Bulletin of the Bureau of School Service* (University of Kentucky), Vol. XV (1942), No. 1.

high scholastic ability who normally would not have attended college.

Employment Conditions

During the same period humanitarian organizations, labor unions, and far-sighted social leaders have persuaded legislative bodies throughout the nation to pass labor laws prohibiting the employment of children. In 1940 the majority of states had legally forbidden the employment of children under sixteen years of age. The influence of this legislation has likewise been reflected in increased enrollments in the high schools and colleges of the country.

Before the outbreak of the war this movement toward the schools was accelerated by the scarcity of gainful employment for young people of high school and college age. That such a situation was no depression phenomenon alone is revealed by the studies of the American Youth Commission which showed that even in prosperous years prior to 1929 it was increasingly difficult for young people to find work. Students of economic and social conditions believe that when the present urgent demand for workers has passed, a large percentage of young men and women from fourteen to twenty years of age will again seek admission to educational institutions.

Studies of the policies of commercial and industrial firms show that before the war these organizations were rapidly elevating the educational standards for initial employment. Business houses which twenty years ago engaged help with only an elementary school education had raised the standard to high school graduation. Other firms had begun to insist on at least a junior college education for initial employment even in positions requiring no technical skill, and a few demanded a bachelor's degree. The raising of educational standards in business has been paralleled in the professions. The requirements relating to preprofessional general education as well as specialized professional training have been extended consistently since 1900. This trend has been interrupted by the urgent demands of the military services for men in specialized fields. In peacetime, however, the professions are returning to prewar educational standards. Indeed, some profes-

sional groups have already increased general education requirements.

Labor Unions and General Education

Labor unions have been no less influential in the extension of education among working classes. From the earliest days of labor union activities these organizations have advocated an extension of educational opportunity at public expense having in mind, of course, the fact that their children were unable to take advantage of educational opportunities above the elementary school available in private secondary schools and colleges. For this and for other reasons they have consistently urged that young people acquire as much education as possible before they enter the labor market.

More significant, however, than their advocacy of greater educational opportunities for the children of parents in the lower-income brackets has been their insistence that the course of study provided for these children include subjects which commonly make up programs of general education in the liberal arts. They are rightly opposed to any dual system of education in the United States which would provide a broad unspecialized general education for the upper-middle and wealthy classes and a narrow specialized vocational education for the children of workers. The influence of these organizations has been very great, therefore, in creating a demand for general education in the upper high school and junior college years. The following statement from the officers of the American Federation of Labor, meeting in Boston from October 4 to 14, 1943, makes clear the position of this organization with respect to the general education of the youth of America.

WHEREAS, Organized Labor has always advocated education among the masses of working people in order that they be better prepared for the battle of livelihood and fulfill their respective places within the movement and in society in general, and

WHEREAS, The American Federation of Labor, through persistent and proper activities, was instrumental in instituting the program of free education for the children of this nation, including high school training, and

WHEREAS, It is universally recognized that the individual who is

properly educated and trained finds suitable employment more readily than one who possesses only a limited amount of schooling, and

WHEREAS, Because of tuition costs, together with the need for subsistence, the average person is unable to acquire any desired schooling above the regular high school courses, and

WHEREAS, At the present time, in certain localities throughout the nation, there are certain schools known as junior colleges, where regular university studies are offered, tuition free, upon certain minor requirements, therefore be it

Resolved, That the American Federation of Labor go on record in favor of the junior college as a means of offering opportunity for a higher education to all young people of this nation with limited resources, and be it further

Resolved, That the American Federation of Labor promote suitable activities tending to encourage the establishment of such educational facilities throughout the entire nation.

The purpose of this resolution is to extend public education in local communities beyond the high school through the first two years of college. The junior college makes it possible for students to secure two years of their college training in the same manner in which they received their high school education. Such a program makes it possible for the student to secure a college education at a much lower cost both in tuition and in costs of living. Consequently the junior college makes possible a college education for many students who could not afford otherwise to go to college. The need for extending public education beyond the high school was emphasized by the fact that thousands of students returned to the nation's high schools for graduate work during the years of economic depression.*

James B. Carey, secretary-treasurer of the CIO, in a talk at Antioch College pointed out that laboring groups were demanding that their children also be introduced to the values and the aesthetic satisfactions which people who are familiar with the fine arts enjoy.

We need to decide whether we want a nation of merely well fed, clothed, and housed individuals, who have developed no sense of beauty, cultivated no taste for reading, pictures, music, or other things which help differentiate human beings from the lower forms of purely physical life. A really full standard of living must include more than

* Labor's Statement, *Junior College Journal*, January 1944, p. 210.

material satisfaction. And unless our schools re-establish courses in other than the immediately practical fields, which have been emphasized during the war, our long-range society will be impoverished in thought and feeling if not in merchandise.⁸

High School and College Enrollments

These changes in our social and economic structure have been largely responsible for the skyrocketing of enrollments in the secondary schools and colleges of the country since the turn of the century. In 1890 there were only 357,813 students in all the secondary schools of the United States. By 1938 this number had risen to 6,736,939.⁹ The full significance of these figures can be realized only by examining the percentage of young people of high school age who were actually in attendance at such institutions. In 1890 only seven persons in one hundred of the appropriate age were attending a secondary school. By 1940 this number had risen to seventy-three for the country as a whole, and in some states, Utah for example, virtually every boy and girl of high school age of sound mind was attending a secondary school.

Enrollments in institutions of higher learning have also risen rapidly. In 1890 there were 125,000 young people in colleges and universities in the United States. By 1940 this number had risen to nearly a million and a half. In the earlier year only one person in thirty between eighteen and twenty-one years of age attended college while in 1940 this figure had risen to one in ten. Though the war temporarily halted these enrollment increases, unprecedented numbers of young people, including men and women returning from the services as well as larger percentages of secondary school graduates, are now applying for admission to colleges and universities. These enrollment figures reveal that the aim of the founding fathers with respect to the general education of our people is now being realized.

Those who view this enormous growth in our educational institutions are often so dazzled by the mere increase in numbers that

⁸ "The Antioch College Institute on Conditions for an Enduring Peace," *School and Society*, LX (September 30, 1944), 223.

⁹ U.S. Office of Education, *Biennial Survey of Education in the United States*, 1938-39, Bulletin 1940, No. 2 (Washington: Government Printing Office, 1942), p. 11.

they overlook an aspect of this social phenomenon which is of much greater educational significance. Educational institutions are not only being asked to educate increasing numbers of young people, but they are also being asked to educate students who in the mass are basically different from the students of an earlier day in previous education, social background, and vocational objectives. President Conant has pointedly described this change in the characteristics of the student population:

But in the last fifty years the scene has been changing rapidly with each passing decade. Quite apart from the enormous numerical expansion of the schools, the composition and aims of the student body have vastly altered. No longer are the schools primarily concerned with preparing boys and girls for college. Consider these figures: In 1870 approximately the same number of male students graduated from all the American high schools as from all the colleges. But the situation altered rapidly, for in 1890 there were, roughly, four times as many boys and girls graduating from high school as from college. And by 1940 the ratio had changed so that there were twelve times as many graduating from high school as from college.^a

The small percentage of boys and girls who attended secondary schools or colleges in the nineteenth and early twentieth centuries were selected mainly from the upper classes. They intended to enter the professions or managerial positions in industry and commerce. The relatively narrow course of study of that day was designed to suit their specific needs. Today young people representing a social and economic cross section of our nation attend educational institutions. Many come to college with no specific educational or vocational objective. They wish merely to extend their general knowledge of the physical world and the people who inhabit it in order that they may be able to make their maximum contribution to society while achieving a personally satisfying life. Nine out of ten cannot hope to become doctors, lawyers, college teachers, or scientists. Hence, they do not need and should not have the highly specialized instruction preparatory to employment in these occupations. And even those who do plan to enter vocations requiring highly specialized and prolonged training must acquire a broad range of knowledge unrelated to their voca-

^a Conant, *Teachers College Record*, p. 159.

tional activities because they, like their contemporaries in other occupations, are also going to be faced with a multiplicity of problems outside their field of employment. The program of the upper high school and lower college years must therefore provide the general knowledge, skills, and attitudes required by this and succeeding generations.

Influence of German Educational Philosophy

If educational institutions are to recast their offerings in such a manner as to adapt them to the needs of American youth, educators must abandon the educational and political philosophy upon which the present program of the school rests. The determinative influence on American education, especially higher education, since the early nineteenth century was of German origin. The educational system of Germany since the beginning has rested on an aristocratic philosophy. The privilege of attending the secondary school or the university has always been limited to fewer than ten percent of the population. This small group, identified early in life, pursued a course of study from the elementary school through the university basically different from that provided for others. The secondary schools and universities of Germany offered intellectual training for a socially, economically, and educationally élite group. This educational program was designed for a static society. Consistent though this philosophy may have been with the relatively aristocratic American social organization of the last century, it is clearly inconsistent with the social and political philosophy of the present times.

The German educational system was founded on intellectual as well as social purposes which are no longer consistent with the needs of America today. German universities of the last half of the nineteenth century, when they were attended by thousands of young American scholars, were dedicated to the extension rather than to the dissemination of knowledge. Prospective American scholars who went to Germany to study devoted themselves to investigation and research in a narrowly limited field of knowledge. The principal aim of university education was the scientific analysis of all aspects of life, and university teaching was designed

to inculcate an interest in and the ability to do investigative work. Even in the fields whose subject matter was uncongenial and refractory to scientific investigation—such as the humanistic studies and religion—the extension of knowledge through critical analysis displaced philosophical reflection and aesthetic appreciation.

As American scholars returned to this country they brought with them the German point of view toward education, with its aristocratic conception of a socially élite class and its emphasis on the extension rather than the dissemination of knowledge. With missionary zeal they indoctrinated their colleagues with this foreign educational dogma, and because of their strategic location in the various fields of learning they often forced an adoption of their views against the opposition of their associates. Even in the small liberal arts colleges the advancement of knowledge became the predominant interest if not the exclusive activity of the faculty, although these institutions often lacked both the physical facilities and adequately trained personnel to justify the use of the time and energy of the faculty for this purpose.

This influence has been chiefly responsible for several features of American higher education which make it unsuitable for a large percentage of American youth today. It has caused teachers to assume that every student would devote himself to the life of a scholar or to some other highly specialized professional activity related to a particular field of learning. There has been a suppressed premise in this reasoning that every student who registers for a course in physics expects to continue the study of that subject into its most specialized upper branches. It has been further assumed that such a student will eventually become an investigator in the field and for that reason should acquire the intellectual habits of workmanship peculiar to the field as well as all the basic knowledge essential to advanced systematic study of its subject matter. Hence, elementary courses have begun with the detailed information which forms the foundation for further study. They have emphasized the techniques of experimentation and the search for knowledge which characterize the scholar's activities. They have included much subject matter for which the average person has no use in his daily life, while neglecting large portions of gen-

eral information which all people should possess if they are to understand and live intelligently in the world today.

As academic men and women specialized in ever-narrowing fields of scholarship, knowledge in these fields was produced in increasing abundance. In the middle of the nineteenth century a course in natural philosophy began to be popular in the colleges and universities of the country. This course, which might more properly have been called natural science, included all the systematic instruction received by the student in the fields now composing the physical and the biological sciences. The extant scientific knowledge was sufficiently small to be compressed into a single college course, at least for those who were merely interested in science as an element of general education. An examination of the average college catalogue of 1939-40 will disclose the extent to which the specialized activities of the scholars have resulted in an elaboration of knowledge in the various scientific fields. It is not uncommon now, even in a college of four or five hundred students, to have as many as a hundred different courses in the fields of the physical and biological sciences.

The rapid proliferation of subject matter in the early decades of this century gave impetus to the development of a program of general education. It had become impossible for any student to achieve a general education by electing even elementary courses in the various subject-matter fields, for these fields had become too numerous and the elementary courses had become, not general introductions to the subject, but basic preparation for advanced specialized courses in the field. Though many attempts have been made in the last ten years to overcome this difficulty by integrating the subject matter of related disciplines, this movement has by no means extended into all the institutions of higher education in America. Indeed, only feeble and often fruitless attempts have been made to organize the college program in such a manner as to provide a broad general education for all students. The continuous increase in knowledge, on the one hand, and the increasingly urgent demand for more comprehensive and less specialized knowledge on the other, will continue to cause faculties of colleges to reorganize their programs in such a way as to provide an adequate program of general education for all American youth.

This educational doctrine has likewise been responsible for the high degree of concentration in the program of the average college student. It has been assumed that the student who penetrates a single field of knowledge most deeply is the best educated. Accordingly, many students leave college with fifty or sixty hours of instruction in one subject and no instruction in many others. Each department has developed advanced courses of a highly specialized nature for the few students within the department who can take advantage of such instruction, while neglecting to develop elementary courses including broad ranges of subject matter for students who intend to major in other departments. An elementary course in psychology, for example, generally includes considerable information concerning the nervous system, the endocrine glands, and the process of perception, which the future Ph.D. in psychology should know but which the average person has little or no use for. On the other hand, such courses often do not consider problems in the fields of abnormal, social, and educational psychology, which the average person will most certainly encounter in one form or another in his daily life. This theory of education has produced scholars and members of the other professions whose competence in the aggregate is unsurpassed by the learned men of any other country. It has likewise been largely responsible for the scientific research which has made American industry and commerce pre-eminent in peace and in war. But it has also caused a large percentage of our young people to leave educational institutions ignorant of large segments of knowledge and unprepared to cope with the multiform problems of modern life.

An American Philosophy of General Education Required

One of the arresting features of American college education is the heavy mortality of students from the freshman to the junior year. To what extent the remoteness of instruction from the everyday lives of students is responsible for this large-scale withdrawal of students before they have completed a defined course of studies it is impossible to say. It can hardly be doubted, however, that the academic character of much elementary instruction drives

many students to the more real, interesting, and rewarding experiences of the shop and the market place. In the average state university from fifty to sixty percent of the young people who enter as freshmen leave before the beginning of the junior year. For these young men and women the highly specialized courses of the first two years, designed as a basis for advanced instruction which they are destined never to receive, are obviously unsuitable. What is needed is a high school and junior college program of general education which by the end of the sophomore year will have given them the basic understandings and skills which everyone should possess whether he leaves an academic institution at the end of that period, continues through a full college course, or enters a professional school.

A type of educational program based upon a different educational and social philosophy is required for American high schools and colleges if our young people are to become informed and intelligent citizens, workers, home makers, and happy human beings.

The Doctrine of Formal Discipline

Social and economic changes of recent years which have necessitated a new viewpoint with respect to general education¹ in the upper high school and the junior college years have been paralleled by developments in the field of psychology which also indicate a need for a review of the psychological assumptions which have been the basis of curriculum construction.

Until late in the nineteenth century most educators accepted without reservation the doctrine of formal discipline—the principle of transfer of training, as it was often described by psychologists. This theory assumed that experiences from one learning situation or set of circumstances automatically became functional in other situations similar in kind. The acceptance of this principle led to the assumption that the school need not provide specific instruction preparing the student for all the varied experiences that human beings might be expected to have in later life. On the contrary, it was assumed that general concepts and skills learned in one set of problems could later be employed in a variety of life

situations somewhat different in detail, but essentially similar to the earlier experiences. Accepting this principle, teachers attempted to emphasize general ideas in their classrooms rather than specific, detailed knowledge.

The Theory of Identical Elements

Early in the twentieth century experimentation conducted by a number of psychologists, particularly Thorndike and Woodworth, caused educators to alter their opinion concerning the capacity of human beings to generalize their experience. On the basis of Thorndike's experimentation the theory of identical elements was formulated and announced to the educational world. This theory held that transfer of training would take place from one learning activity to another only to the extent that the two situations included identical elements. A simple example of the application of this theory can be found in the transfer of certain muscular actions from the playing of the piano to the operation of the typewriter. More complex examples occur in the mental processes involved in addition and multiplication.

The impact of this educational theory on the curriculum of the schools at all levels was profound. The most far-reaching consequence of the widespread acceptance of the theory was an increased emphasis in teaching on specific experience. Since the human mind was assumed to have little capacity for generalizing experience, the school had to provide detailed and specific instruction in all the various phases of living which the student might encounter in later life. An example of the absurd lengths to which educators went under the influence of this pedagogical doctrine can be found in the field of mathematics. Several investigators made an inventory of the mathematical operations employed by sales clerks in their daily work. This study revealed that the calculations which these clerks were required to make involved the use of only a few fractions. If they understood the use of certain common fractions they had all the knowledge of fractions required in their employment. Other studies of the mathematical knowledge commonly employed in the everyday activities of life were to supply the full complement of specific mathematical

knowledge needed by the average American.⁹ Hence, it was not necessary to teach young people the general mathematical concepts which form the system upon which all numerical thinking depends. Instead of making the student familiar with the basic theory and general principles of number applicable to any circumstances requiring a knowledge of mathematics, the schools were exhorted to drill students in the use of specific arithmetical operations.

This same doctrine was influential in the development of education in the professions. Accepting the theory of specific training, educational leaders in the various professions found it necessary to include in the curriculum all the specific activities of professional practice. This philosophy of education has been in part responsible for the rapid multiplication of specific courses in the premedical course of study and for the rapid elaboration of narrowly specialized courses in the medical school. Comparable examples of the influence of this doctrine can easily be found in the other professions.

Colleges of arts and sciences and the high schools have been influenced even more profoundly. This school of thought has been largely responsible for the highly concentrated program of studies of the average arts-college student. Together with the absorbing interest of teachers in the highly specialized branches of their subjects it has been responsible for the proliferation of advanced courses in the various subject-matter fields. Its influence is likewise reflected in the attitude of students who have increasingly favored courses with a clear vocational or utilitarian objective.

Under the impact of this widely accepted educational dogma high school and college curriculums became a mosaic of highly differentiated and unrelated courses. The college student of the past twenty years usually made up a four-year course of study by selecting a variety of elementary courses such as biology, psychology, chemistry, foreign languages, and government, all of which were organized on the assumption that the student must have an abundance of specified detailed information in prepara-

⁹ For illustrations of the application of this reasoning to the curriculum in mathematics, see Edward L. Thorndike, *The Psychology of Arithmetic* (New York: Macmillan Co., 1922).

tion for future study in these fields. In addition to these elementary courses which made little attempt to interrelate subject matter, the student rounded out his program for the bachelor's degree by taking a half-dozen highly specialized advanced courses in a single field. These courses were generally designed to provide the detailed knowledge required for further advanced study in the graduate school though only a negligible percentage of college graduates ever attended such institutions. The prevailing psychology of the past forty years did not encourage educators to develop a curriculum sufficiently general to satisfy the hundreds of thousands of American youth who attended educational institutions.

The Influence of Recent Psychological Theory

Recent psychological experimentation has, however, demonstrated that the doctrine of specific training rested on inadequate evidence concerning the operation of the human mind. Studies conducted by the Gestalt school of psychology and by other investigators have shown that transfer of training definitely does take place when the circumstances of the learning situation are properly arranged. Whenever the methodology of instruction is designed to cultivate the capacity to generalize experience, the learner acquires not only the specific information involved, but also a body of general principles which can be applied to novel situations as they arise. Moreover, it has been shown by Tyler and others that where this capacity for generalization is made an objective of instruction, material so learned is retained longer than specific information. Tyler showed, for example, that in the course of an academic year students lost a very large percentage of the detailed information they had learned in courses previously taken. The generalizations or laws which they had learned, however, were retained nearly completely, and the student was able to apply them in the solution of problems with which he had had no previous experience.

The import of this discussion of psychological theory is that the curriculum of the upper high school and the lower college years can be reorganized in such a manner as to include a broad array

of general courses in a variety of fields without causing the student to lose any of the essential educative values in more conventional courses of study. General courses in psychology, biology, and the physical sciences can and should be developed which include a wide selection of subject matter embracing the basic principles in these fields as well as illustrations of the intellectual methodology peculiar thereto. Modern psychology does not dictate that each subject be developed systematically from the most elementary fact to the highest possible generalization, including all the detailed factual data of which college courses have commonly been composed. No fundamental educational values need be lost in a broad program of general education if the methodology of instruction rests on the sound psychological principle that the student should be taught to generalize and apply the knowledge he acquires. A curriculum based on the doctrine of specific training includes no intrinsic educational values which cannot be gained in a program of general education.

Specialized versus General College Courses

One of the most common misconceptions among educators and laymen alike is that the student who pursues a narrow program of highly specialized courses automatically prepares himself for a superior record in a professional or graduate course of study or for success in his chosen vocation. It is often assumed, for example, that the premedical student who concentrates heavily in the biological or physical sciences to the exclusion of many other disciplines, *ipso facto*, guarantees himself a superiority in the professional school over his classmates who choose a more varied program of studies.

A number of studies¹⁰ have shown, however, that those students who pursue a narrow, highly specialized course of instruction are no more successful in professional schools or in professional practice than are those who have had a broad general education. Studies at Harvard University revealed that students who ma-

¹⁰ Earl J. McGrath, "What Subjects Should the Premedical Student Study?" *Journal of Association of American Medical Colleges*, XX (September 1945), 279-80, and "What Subjects Should Pre-dental Students Study?" *Journal of Higher Education*, XVI (October 1945), 351-57.

jored in the natural sciences in Harvard College made no better records in the medical schools than those who majored in the humanities or the social sciences. Students who had majored in the humanities and social sciences made no better records in the law school than those who had majored in the natural sciences. Even at the high school level this same situation obtains. Professor Harl Douglass at the University of Oregon in a study of the relationship between courses pursued by students in high school and success in college showed that the pattern of high school courses a student elected was less closely related to future academic success than the quality of his intellectual performance. The students who achieved superior standing in high school were in general the best students in college regardless of the type of courses they elected. The conclusion that may be drawn from these studies of the relative merits of specific and general education is that general habits of intellectual workmanship are of far greater value than any particular specific body of knowledge.

Vocational Training and General Education

One of the most practical arguments for a broad program of general education in the upper high school and lower college years is to be found in the reports of the American Youth Commission. Studies of the amount of education required for initial employment in various occupations in the United States show that very little specific training is required other than that which can be secured on the job. Only 12 percent of the occupations in this country such as the professions and supervisory and managerial positions in industry and commerce require any specialized education beyond high school. Another 25 percent of American occupations require specialized training of from a few weeks to six months beyond the general education provided in the lower schools. The remaining two-thirds require no specialized training which cannot be better provided on the job. It is clear, therefore, that the vast majority of American high school and junior college students should receive general instruction in the various subject-matter fields which will be useful to them in the common activities of life. And even those who are going to enter the professions

and other specialized lines of work must have this general common background of experience if they are to adjust adequately to the complex modern world.

It should be clear to the objective observer of these forces which bear upon the educational system of the country that the high schools and colleges, if they are to serve adequately the needs of youth today, must develop courses of instruction which include larger major bodies of generalized knowledge than those common in these institutions at present. The educational program of the first fourteen years of the student's school life should be devoted to a cultivation of those general intellectual habits, bodies of information, and skills required by all American youth. Many of the courses which now have a distinctly vocational orientation or which carry the student into the upper branches of esoteric subjects must be displaced by others more closely related to the everyday life of students. Thus, students will leave academic institutions better prepared to understand the physical and social world in which they live, better able to appreciate the moral, the intellectual, and the aesthetic values upon which a personally satisfying life can be built.

The next four chapters of this report outline the issues met and describe the efforts made by the faculties of the cooperating institutions to develop such programs of general education. The final chapter presents the conclusions reached by the Executive Committee regarding many of the problems dealt with in the Study.

Issues in General Education

THE COOPERATIVE STUDY aimed to *improve practice* in general education. It did not set out to raise issues. However, persons and groups within the Study raised issues whenever they disagreed about the ends or means involved in improvement.

At one extreme were very specific issues at the level of practice—issues concerning particular problems in particular colleges. For example, should all students in X college be required to take a philosophy course? Or, should the social science course at Y college be organized about contemporary problems or about the major social forces in our society? Obviously, the Study had to secure agreement on proximate goals and immediate steps toward them if it was to improve practice cooperatively.

At the other extreme, always lurking in the background and sometimes emerging into the foreground, were very general issues of basic philosophic *principle*. In any discussion between college faculty members fundamental questions concerning ethics, social philosophy, aesthetics, logic, epistemology, and metaphysics are apt to arise. The Study could not hope to secure agreement on such matters among several thousand college teachers. It was necessary, therefore, to discuss philosophic issues enough to satisfy teachers of varying philosophic orientations so that they could agree on certain proximate goals and immediate steps without violating their basic principles.

Between the specific issues of educational practice and the general issues of philosophic principle were issues of a third type—issues of educational *policy*. Because such issues characterize the literature of general education and appeared repeatedly during the Cooperative Study, they seem to merit extended treatment.

Some Issues of Educational Policy

As one examines the literature of the field, he is at once impressed both by similarities and agreements, and by controversies and disagreements, among the proponents of general education.

He finds a united faith in the importance and value of education to the individual and to society. He finds agreement in criticizing a higher education which has overemphasized preparation for specialization and underemphasized education for the common life, a higher education which has worshipped credits and has neglected the values which credits theoretically represent, a higher education which has accepted freedom and has lost unity.

The writers of the literature not only express faith in education, and not only express faith in general education, but particularly do they also put their confidence in their special brands of general education. With Messianic urgency each writer advances his particular plan—a plan which will not only cure the ills of education but a plan which will cure the ills of society. The descriptions of these varied plans and the presentations of their differing philosophies suggest a confusion which at times shatters the unity of purpose that must characterize general education. The controversies and disagreements generally arise over such antithetical points of view as the following:

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|---|--|
| Education is everywhere the same. | Education must adapt itself to situations and change with the times. |
| Too many students go to college. | Too few youth continue in school beyond high school. |
| Collegiate general education should concentrate on training the intellect. | General education must educate the "whole man." |
| General and liberal education must fight off the encroachments of vocationalism. | Real general education includes preparation for vocational competence. |
| Because students have common needs, general education should be the same for all. | Because students differ in interests, abilities, and needs, even general education must be individualized. |

Education should transmit the culture of the Western World.

General education in college should train in and through the arts of thought and communication—reading, writing, etc.

The college should concentrate on its traditional main function, letting other institutions care for their different functions.

No indoctrination!

Keep standards high; eliminate students who fail.

Give each student two (or four) years of the richest possible educational experience before permitting specialization.

Start with students' present interests; lead on toward deeper interests.

Specializing students should be excused from the general education course in their own field.

Excuse from general courses those students who prove on examinations that they are ready for more advanced work.

Give each student firm convictions and a sound philosophy of life.

Education should prepare students for problems of today, not tomorrow.

General education should utilize field trips, work experiences, movies—all types of learning experience.

When other institutions are obviously failing, the college should take over some of the functions they used to perform.

Teach the democratic way of life!

Set an appropriate individual standard for each student, adjusted to his abilities.

Make each student achieve the objectives of general education; let him go on to specialization as soon as he achieves them, but not before.

Start immediately with the issues which should interest mature students and challenge their interest and effort.

Specialists need general education courses in their fields at least as much as do other students.

Require all to take each general course, to share in a common experience with the entire group.

Steer clear of anything approaching religion, except in denominational colleges.

Enough has been said to indicate that there are in general education a group of issues with which the individual college must deal before it can project a valid program of general education—education for the common life. It shall be the purpose of the

remainder of this chapter to discuss some of these issues and to indicate how such issues were handled in the Cooperative Study.

THE FEW VERSUS THE MANY

This particular issue is encountered on two different fronts: first, on the broad front of society's position on the issue; and, second, on the more narrow sector of the position of the individual college. The position of American society regarding the post-high-school education of youth is open to little argument; it is being decided by forces outside of and greater even than education. Technology has gradually increased the efficiency of production to the point that youth's period of preparation is being pushed beyond the high school years.

Because society and education were not prepared to meet the situation, in the thirties we had more than four million youth both out of school and out of work. With a rapid acceleration of technological development during the war we can expect the trend toward a longer period of preparation for youth to be accentuated in the postwar period. Various stop-gap measures (such as the CCC, and the NYA) have been proposed by means of which society might function as custodian of an idle age group. The proposal of a compulsory year of military training, though suggested for a different reason, moves in the direction of partially caring for youth during their lengthened period of preparation for work.

More significant than the stop-gap or short-term measures for caring for youth during the late teens are the proposals of such agencies as the American Youth Commission, the National Resources Planning Board, and the Educational Policies Commission. These groups recommend the upward extension of public education to include grades thirteen and fourteen. Though the pattern of education proposed for these years is flexible, certainly there is unity in recommending general education—education for the common life—as essential to the training of our citizenry.

Thus the issue relating to the selection of students for training beyond grade twelve seems to have been solved, or at least to be well on the way to solution, on the broad front of American society; but the issue is one which still must be settled by each

separate educational institution. Even in a society committed to "education for all youth," any given school or college may well direct its attention and emphasis to one particular segment of American youth.

One group of colleges, for the most part liberal arts colleges, aims to select for admission only those high school graduates who have superior intellectual ability. These institutions conceive their function as one of selecting and training leaders for various fields of American democracy. Are they concerned with providing general education? Education for the common life? Yes, by all means, but providing it for a chosen few selected on the basis of intellectual ability.

It is the belief of colleges which follow this practice that their major contribution to American democracy will be qualitative, rather than quantitative, training of leaders rather than training average citizens. These colleges put much emphasis upon excluding or dismissing unfit students; they deplore the influx of inferior students; they point to large numbers of students who have applied for, but have been denied, admission; they take pride in the numbers of their alumni who have continued their education in graduate schools. These colleges believe that a neglected phase of education in democracy is the training of leaders, and they conceive their function as serving this goal. The admission of average or inferior students would reduce competition and would consequently lower standards. Among educators who hold this position are those who assert that an institution with anything less than a highly select student body is simply not a college. A college is by definition, they hold, an institution of higher learning designed to train scholars and leaders. The training of the average, and even of the mediocre, student has its place in society, but "it simply is not college."

Over against this position is that of those educators and colleges which accept as their particular function the training of an educated citizenry—not only leaders but also, and perhaps especially, the ordinary citizen. Many such institutions would not be particularly interested in what they are called or how they are designated—college, junior college, people's college, institute. The important factor is the function they serve.

These colleges would suggest that in a democracy our leaders can be no stronger than our citizenry, for in developing a world order, we need both leaders and ordinary citizens with insight and ideals. These colleges believe that we need to educate the voter as well as to educate the senator; we need to educate the consumer as well as to educate the producer; we need to educate the mother as well as to educate the minister. These colleges are less concerned about those who *should go* to college than about those who *do come* to college. They are less likely to worry about adapting the student to the college than about adapting the college to the student. Accordingly most of these colleges strive to develop educational programs which are flexible and which meet the needs of students of varying capacities and interests. These colleges, though alike in that they are flexible, vary in the types of students they attract and admit. Some colleges pressed by economic need or community demand, rather than by an educational philosophy, opportunistically admit all comers and attempt to do a makeshift educational job which they fundamentally do not respect.

Other colleges which have an opportunity to select the type of students they feel they can and should serve plan to admit students of widely differing abilities. Some of these colleges would suggest that even in training leaders they need in their student bodies groups of average students. This point of view was well described by President Aydelotte in his inaugural address at Swarthmore more than two decades ago: "We need the humanizing presence of the average student." Other colleges, not primarily concerned with the training of leaders, would aim to select students of wide and varying intellectual ability in order to provide and point the way for training an educated citizenry.

Society increasingly demands an education for all youth; democracy requires an educated citizenry and trained leadership. There is, therefore, in our nation a place for colleges of all types—colleges which train leaders, colleges which train leaders and average citizens. The issue of the few versus the many is, then, becoming less of a social issue and becoming increasingly an issue for the individual college. Each college must deal with this issue, and do so on the basis of its facilities, the availability of students, and its philosophy of values.

ELECTION VERSUS PRESCRIPTION

The practice of requiring a group of courses designed to meet common needs *versus* the election of subjects in terms of the individuality of the student represents an issue upon which there is sharp difference of opinion among American educators and difference in practice among colleges. One group fears the chaos of a curriculum for every student; the other group is equally wary of an academic strait jacket to be imposed upon everyone.

Those who contend for the prescription of courses point out that there are in society a group of needs common to all, whether these be defined as acquaintance with a body of subject matter or achievement of effectiveness in areas of living. Since this is the case, it is the duty of the college to build a curriculum designed to meet these common needs and to require all students as a part of their general education to take the courses basic to such needs. Under this point of view the college which fails to prescribe is shirking its duty. The college knows what is good for the student—for all students. If the college does not see that students take what they obviously need, it is failing to meet its obligation to the student and to society.

Inherent in the position taken by most educators holding to the prescribed-course viewpoint is an attitude of worry regarding the value, or relative value, of many courses in the college curriculum. Foerster expresses this viewpoint as follows: "Only a university drifting without standards will declare that all subjects should be free and equal, that one subject is as good as another, and that selection should therefore be relative to the students' individual differences."¹ Cunningham echoes Foerster's criticism as he attacks Eliot's introduction of the elective system at Harvard: "The theory back of this innovation was what we call the fallacy of the equivalence of studies; that is, any subject of study is as worthwhile as any other subject, provided it is taught as well and studied as seriously. Carried to its logical absurdities, this means that ping-pong has as much value for the student as mathematics,

¹ Norman Foerster, *The American State University* (Chapel Hill: University of North Carolina Press, 1937), p. 249.

provided it is taught as well and the student applies himself to it as seriously."²

The courses required by Foerster and Cunningham would comprise a classical curriculum. Other proponents of prescription would heartily disagree with a classical content, but would contend for requiring so-called "functional" courses. This practice is followed, for example, in the General College of the University of Florida, where their course "Reading, Speaking, and Writing" is one of four required courses, and at Pasadena Junior College where required courses include homemaking and guidance.

As opposed to the practice of prescription, a considerable group of educators and of colleges would defend in varying degrees a plan of course election in terms of the individuality of each separate student. These educators take the viewpoint that man is motivated by goals which he identifies and accepts. Prescription of courses or other learning experiences designed to meet goals set by an external agency—a college, for example—too often results in disliking subjects and what they stand for, in creating blocks to learning, and in causing emotional resistance to all types of education. Dewey expresses this danger when he asks: "What avail is it to win prescribed amounts of information about geography and history, to win ability to read and write, if in the process the individual loses his own soul; loses his appreciation of things worthwhile, of the values to which these things are relative; if he loses desire to apply what he has learned and, above all, loses the ability to extract meaning from his future experiences as they occur?"³

Those who support the elective plan suggest that contrasted with the real dangers of prescription are the liberating values inherent in choosing courses and other learning experiences on the basis of goals recognized and accepted by the student. Freedom to choose courses and plan the attainment of individual goals will, they claim, more often result in significant achievement, including

² W. F. Cunningham, *The Pivotal Problems of Education* (New York: Macmillan Co., 1940), p. 315.

³ John Dewey, *Experience and Education* (New York: Macmillan Co., 1938), p. 50.

the attainment not only of knowledge but also of attitudes, skills, habits, and independence of thought and action. Supporters of the elective plan place a great deal of emphasis upon the value of developing individual responsibility and self-dependence. They point out that in life the adult is constantly required to make choices and decisions. Since this is the case, the college can, it is argued, best prepare the student for adult life by requiring him to do in college what society will require him to do in life—to make choices and decisions on the basis of his individual goals and aspirations.

Contrasted with the viewpoint of those who accept a hierarchy of value for college courses is that of those who, in support of the elective plan, contend that what is valuable for one student may have little or no value for another. In other words the value of a course is dependent, not primarily upon its content and its other characteristics, but rather upon this content and these characteristics as they are related to and affect *particular individual students*.

In answering the critics of the elective plan who express concern about the chaos and lack of unity inherent in freedom of election, proponents of that plan suggest that election does not destroy unity; it simply changes the basis of unity from a subject-matter unity to a student-centered unity. In attaining this student-centered unity, colleges using the elective plan are increasingly developing guidance programs to aid students to identify their needs, recognize their abilities, and define their goals. This trend is illustrated by Benezet's report of his investigation of three so-called "progressive colleges"—Bard, Bennington, and Sarah Lawrence. On the basis of his study of these colleges, each of which is committed to a student-centered and individualized program, Benezet reports: "The choice by the student of a course-program is nowhere (i.e., in none of the three colleges studied) treated as a 'free election.' The adviser system functions in varying degrees to help him pick those courses which seem best fitted to his nature and purposes."⁴

A somewhat different position is that of those who oppose uni-

⁴ L. T. Benezet, *General Education in the Progressive College* (New York: Bureau of Publications, Teachers College, Columbia University, 1943), p. 138.

form group prescription but who favor prescription in terms of individual needs. Those who favor this position would expect the college to identify the needs of the individual student and to require him to take courses or participate in learning experiences selected on the basis of individual needs.

Enough has been said to indicate clearly that the issue of prescription versus election is very much alive today. Every college in planning its educational program must deal with this issue, considering its philosophy of learning, of values, and of goals.

INTELLECT VERSUS TOTAL PERSONALITY

An important issue for the college interested in a program of general education is the extent of the college's responsibility for aspects of student development in addition to intellect.

On the one hand, it is proposed that the college is primarily and basically concerned with the intellect. If it is to meet its responsibilities for training the intellect, it can and must leave to other social agencies responsibility for training in other aspects of living. On the other hand, the claim is made that the college is responsible for the education of the whole student. Since the student learns and his behavior is modified by all types of experiences, the college cannot afford to neglect or ignore any aspect of the student's life and experience. The student is a single unified organism—not one compartment of intellect, one of emotions, and one of health. Even if the college in terms of its objectives were concerned only with intellectual training, it would need to deal with emotions, attitudes, and health, for all of these are related to and affect the student's learning.

The viewpoint of those who would limit general education to intellectual training has perhaps been most forthrightly expressed by Hutchins who states in discussing general education, "If education is rightly understood, it will be understood as the cultivation of the intellect."⁵ Hutchins not only emphasizes intellectual attainments but also he excludes from general education non-intellectual goals: "We have excluded body building and char-

⁵ Robert M. Hutchins, *The Higher Learning in America* (New Haven: Yale University Press, 1936), p. 67.

acter building. We have excluded the social graces and the tricks of trades."⁶

Hutchins and his followers express real concern lest the college attempt to achieve such varied goals that it will fail to realize its primary purpose which he conceives to be intellectual training.

It hardly helps us here to say, as many anti-intellectuals do, that education must educate "the whole man." Of all the meaningless phrases in educational discussion this is the prize. Does it mean that education must do the whole job of translating the whole infant into a whole adult? Must it do what the church, the family, the state, the YMCA, and the Boy Scouts allege they are trying to do? If so, what is the place of these important or interesting organizations, and what becomes of that intellectual training which educational institutions might be able to give if they could get around to it? Are we compelled to assume that our students can learn nothing from life or that they have led no life before coming to us and lead none after they come? Moreover, what we are seeking is a guide to the emphasis that higher education must receive. Talk of the whole man seems to imply that there should be no emphasis at all. All "parts" of the man are of equal importance: his dress, his food, his health, his family, his business. Is education to emphasize them all? That would be like saying, if we were going to study the war, that in studying it we should emphasize the war. A flat equality among subjects, interests, and powers will hardly lead to the satisfactory development of any. Is it too much to say that if we can teach our students to lead the life of reason we shall do all that can be expected of us and do at the same time the best thing that can be done for the whole man? The task of education is to make rational animals more perfectly rational.⁷

Although Hutchins has perhaps most vigorously championed this viewpoint, he is not without his supporters. A committee of the American Council of Learned Societies in studying liberal education echoes Hutchins' fears.

Among educational institutions must be reckoned the family, church, press, radio, and motion picture, as well as the school. Each of these contributes greatly to education. . . . The school is therefore not solely responsible for education. . . . if it attempts to perform, in addition to its own difficult and important function any of the primary functions

⁶ *Ibid.*, p. 77.

⁷ Robert M. Hutchins, *Education for Freedom* (Baton Rouge: Louisiana State University Press, 1948), pp. 86-87.

of these institutions, it will jeopardize its own distinctive contribution and become less effective in providing that type of education which it is best qualified to offer.⁸

Hutchins and the committee of the American Council of Learned Societies would not, of course, belittle the importance of a citizenry which follows habits essential to healthful living, which has well-developed character, and which fulfills its obligations in home and family life. They would, however, contend that these desirable goals can best be cared for by agencies outside of the college and that the college can make its greatest contribution to the individual, even in terms of the goals mentioned above, by providing him with intellectual training. If we train the intellect, it will curb, control, and motivate man's animal desires and appetites.

In contrast with the position taken by Hutchins and his followers is that held by those who assert that intellect is only one segment of life, that the college in its program of general education has responsibility for the development of the total personality. Man's behavior is governed only in part—and many would contend in small part—by his intellect; equally, and many would say more, important and equally subject to education are his emotions.

This viewpoint is defended by Cowley:

... the purpose of the college is the training of the whole student, not of his mind alone. I take this stand because it is my deep conviction that in education and in living intelligence is not enough. Intelligence is not enough because thinking is only part of living; because students come to college not only for the training of their minds but also for the enrichment of their lives as people; because college students need the advice and direction of mature and experienced adults who understand their problems; because as expressed in the motto of Hamilton College they seek to know themselves; because such self-knowledge is emotional and social and spiritual as well as intellectual; because not only the student's mind comes to college but also his body; because, as most alumni will testify, the lessons in human relations learned from one's fellow students complement the lessons learned from books and professors; because college is not only an intellectual enterprise but also a social and spiritual environment; because society expects from

⁸ Committee appointed by the American Council of Learned Societies, *Liberal Education Re-examined* (New York: Harper & Bros., 1943), pp. 35-36.

college graduates not only intelligence but also civilized attitudes, matured emotions, and cultivated character.⁹

Those who support "holoism" (as Cowley designates his position) repeatedly refer to the findings of psychology and of the biological sciences as a basis for their position:

. . . the psychological and biological discoveries of the last fifty years have revealed the inner world of man as one in which the desires and appetites operate in the closest connection with the intellect and in ways that do not allow intellect a clear dominance. The human organism is seen as profoundly unified. During emotion there are physiological changes which affect the functioning of the intellect. On the other hand, the mind can influence the physiological state of the body. All behavior, including intellectual functioning, is a function of total personality.¹⁰

In our effort to understand and classify the complex activities and abilities of man we have fallen into the habit of speaking of "body" and "mind" as though they were two separate entities, distinct in origin and function. . . . Increasingly, doctors, psychologists and philosophers are coming to realize both that man is a total organism, and must be so understood and treated, and that there is no such thing as emotion divorced from the body that reflects and expresses it.¹¹

The implications for a college of the acceptance of either the "intellect only" or the "total personality" position are clear-cut. The college which is concerned only with the intellect will include in its program those activities which are intellectual in their nature and purpose; it will exclude all others, or regard them as extra-curricular. Classes and courses will emphasize reading, study, discussion, examinations, and perhaps investigation. Extra-class activities will be sharply subordinated, or even omitted entirely, except perhaps for a few select activities such as debates and forums. A health service will be maintained only to care for the sick. Guidance and advising deal primarily with the selection

⁹ W. M. Cowley, "Intelligence is Not Enough," *Journal of Higher Education*, IX (1938), 476.

¹⁰ R. J. Havighurst, "The Issues Are Three: Social, Psychological, and Educational," Subcommittee of the General Education Committee, Commission on Curricula of Secondary Schools and Institutions of Higher Learning, North Central Association of Colleges and Secondary Schools, ed., *General Education in the American High School* (Chicago: Scott, Foresman & Co., 1942), p. 165.

¹¹ S. H. Kraines and E. S. Thetford, *Managing Your Mind* (New York: Macmillan Co., 1944), p. 17.

and planning of courses and other intellectual activities, and perhaps advice and aid on how to read and study. The college which accepts this position can readily attain a unity of organization and action; its program can be streamlined; its energies need not be dissipated and dispersed, for they can be marshalled and focused upon one supreme goal—intellectual growth and development.

The program of the college which is concerned with the total personality of the student is obviously quite different. The student's curriculum is recognized to be the sum total of his experiences, both in the classroom and outside. The phrase "extra-curricular activities," sometimes used to designate such activities as those carried on by clubs and student government, is changed to "extra-class activities," for these activities are and should be a part of the student's experience and, therefore, of his curriculum. Extra-class activities, their values, and their planning can no longer be left to chance; they are planned and programmed with the same care and attention that is given to classes. Guidance is something more than academic advising; its function broadens to include planning a program of activities leading to the attainment of the student's goals—personal, social, intellectual, and moral. The health service is no longer a passive agency designed to care for the sick; it is vital and active in teaching habits, attitudes, information essential to healthful living. Although the college does not take over the function of the church, the community, and the home, it does relate its various activities to these other agencies of education, to avoid duplication, to develop insights, to vitalize learning.

Even the nature of class work may change under the concept of concern for the total personality. No longer is the function of a class solely intellectual—reading, study, discussion, reports, and examinations. The social relations in the class may become a means of achieving personal-social adjustment. Whatever type of learning experience can contribute to the development of the various phases of personality may be used.

It is clear, indeed, that the college which really accepts either the "intellectual only" or the "total personality" position is making a decision which affects many aspects of its educational program—its curriculum, and its selection of students, its guidance program, and its selection of faculty.

BROAD TRANSFER OF LEARNING VERSUS FUNCTIONAL ORGANIZATION

In Russell's investigation of special procedures employed by liberal arts colleges in their programs of general education, he identified a number of innovations. One of these he has, however, singled out for special comment: "The most radical innovation of the entire group, the functional organization of subject-matter courses, is worthy of especially serious attention, for if it proves successful, it will revolutionize the plan of subject-matter organization that has been fixed for more than two thousand years in Western Civilization."¹²

In describing this innovation Russell states:

The organization of knowledge into the recognized and traditional fields of subject matter has apparently been a natural outcome of the work of scholars and investigators. Attention has repeatedly been called in recent times to the fact that in the practical situations faced by persons in daily life problems are not often pigeon-holed in these traditional subject-matter fields, such as algebra, American history, economics or psychology. The attempt to organize the presentation to the student around "problem areas," or functions, instead of in terms of the traditional subject matter fields is perhaps the most radical step since the original formulation of the seven liberal arts in the days of ancient Rome.¹³

At the heart of controversies over the means of best attaining the goals of general education there appears this issue of functional organization which Russell refers to as radical and revolutionary. Those who oppose the functional organization of subject matter contend that general education—education for the common life—can best be achieved through mastering a body of subject matter not so directly and obviously organized in relation to such needs and areas. The antifunctionalist¹⁴ suggests that the functionalist is too narrow in his vision and outlook. He is educating only for the society of today, not for the changing conditions of tomorrow; he is educating for life as it is lived, not for life as it should be lived; he is a static misfit in a dynamic civilization.

¹² John Dale Russell, "General Education in the Liberal Arts College," *Thirty-Eighth Yearbook of the National Society for the Study of Education*, Part II, *General Education in the American College* (Bloomington, Ill., Public School Publishing Co., 1938), p. 189.

¹³ *Ibid.*, pp. 186-87.

¹⁴ This term is used in this chapter to identify those who oppose the particular functional viewpoint identified above.

Proponents of functional organization of subject matter question the belief in broad transfer of training on the basis of which the usual subject organization is justified. They point out the difficulties of transferring theory into action. They then contend that general education can best be achieved through attaining knowledge and developing attitudes and skills which are organized directly in relation to student needs and areas of living. If knowledge is to function in living, they assert, it must be applied to the problems and needs of life. In other words, if transfer of training is to take place, transfer must be taught. Subject matter and learning experiences must be selected and organized on the basis of their application and of their relationship to the needs and life activities of the learner and to the needs of society.

The functionalist denies the accusation that his outlook is narrow, his vision limited. He asserts, "The terms *needs* and *functional* . . . are not used in any narrow sense. They refer not only to needs which the student sees, but also to those which he should be made to see; they refer not only to life as it is actually lived, but also to life as it might better be lived; they refer not to some narrow and highly specialized segment of life but to life in its manifold aspects."¹⁵

Among those who oppose the functional organization of subject matter there is disagreement about what organization should be used, and to some extent, what content taught. One group, represented by Hutchins, Foerster, Van Doren, and St. John's College, would use *great books* as the basis for organizing their curriculum.

We have then for general education a course of study consisting of the greatest books of the Western world and the arts of reading, writing, thinking, and speaking, together with mathematics, the best exemplar of the processes of human reason. If our hope has been to frame a curriculum which educates the elements of our common human nature, this program should realize our hope. If we wish to prepare the young for intelligent action, this course of study should assist us; for they will have learned what has been done in the past and what the greatest men have thought. They will have learned how to think themselves. If we wish to lay a basis for advanced study, that basis is provided. If we wish to secure true universities, we may look forward to them, because students and professors may acquire through this course of

¹⁵ E. F. Potthoff, "Fundamental Purposes of General Education," *Journal of Higher Education*, XIII (1942), 73.

study a common stock of ideas and common methods of dealing with them. All the needs of general education in America seem to be satisfied by this curriculum.¹⁶

Another group of educators, while holding with the transfer of training theory, take sharp issue with the *great books* avenue. They advocate the practices followed by a majority of the liberal arts colleges of the country that require students to take one or more courses in each of the major fields of learning.

. . . each of the major liberal disciplines [mathematics, the natural sciences, the social studies, and the humanities] has an essential contribution to make but . . . none is of such a character and importance as to justify exclusive emphasis upon it at the expense of the others. Each will be found to have its own distinctive values and limitations; none can be ignored with impunity, and none should be allowed to monopolize the attention of the student.¹⁷

An ideal curriculum will include all the major liberal arts and sciences. . . . Whether or not it is organized according to divisions, it will introduce the student to each of the major disciplines, so that no essential aspect of his cultural heritage is neglected.¹⁸

This sampling of knowledge and methods of work in the fields of the various liberal disciplines will, it is contended, develop understandings and insights which the student will apply to decisions and activities of day-to-day life.

A third approach based on belief in broad transfer of training is the selection of content on the basis of a *survey of the fields of knowledge*. In colleges which subscribe to this plan each student is expected to take several survey courses. Proponents of the survey approach to general education hold that the liberal arts approach utilizes a sampling technique which makes a lack of unity in the thinking and understandings of the student. They further contend that, on the other hand, the survey technique organizes the student's knowledge and thinking in large, integrated wholes. Again, supporters of the survey technique assert that acquaintance with the fields of knowledge and methods of work included in surveys broadens the student's understandings and insights to the

¹⁶ Hutchins, *The Higher Learning in America*, p. 85.

¹⁷ Committee appointed by the American Council of Learned Societies, *Liberal Education Re-examined*, p. 45.

¹⁸ *Ibid.*, p. 119.

extent that he can apply them to problems of everyday living.

A fourth approach to general education is that which is followed in the so-called "progressive colleges." In his study of Bard, Bennington, and Sarah Lawrence colleges, Benezet describes this approach as follows: ". . . the core of what the individual student studies is not 'courses' but whatever he and his adviser construct it to be. It is, therefore, in part at least, a system of tutorials, in which the tutorials become, not aids to course work, but substitutes for the courses themselves."¹⁹ This approach to general education could, of course, be applicable to the functional organization of subject matter. In such an event the curriculums of the progressive colleges might well be considered as illustrating the functional approach to general education. As a matter of fact, however, Benezet reports that the trend in these colleges appears not to have been in the direction of functional organization but rather in the direction of traditional organization selected and used with the needs of the individual student in mind: "Despite the aim toward life-centered education, the essential subject matter studied in the progressive college to date has remained a fairly conventional menu of liberal arts, within four main fields: natural science, social science, literature, and fine arts."²⁰ The context of the student's "study, as we have seen, has remained chiefly—too much perhaps—conventional liberal arts subject matter."²¹

Proponents of the individualized program hold that preparation for the common life can best be achieved by having students work on materials which seem significant to them. By learning *how* to approach problems and work on them, and by making decisions and accepting responsibility for them, the student is becoming prepared for the common life.

Despite significant differences in their programs of general education each of the four groups—*great books*, the *liberal arts*, the *survey of knowledge*, and the *individual program*—just identified agree in asserting that the student can best prepare to live the common life by attaining insights, understandings, and abilities through studying subject matter not organized in direct relation

¹⁹ Benezet, *General Education in the Progressive College*, p. 47.

²⁰ *Ibid.*, p. 189.

²¹ *Ibid.*, p. 170.

to the areas and needs of everyday life. These groups contend, in other words, for broad transfer of training from learning in an academic field to its use in life-situations.

In contrast with this position is that of those who propose the functional organization of subject matter. They hold that the findings of psychology demonstrate that "automatic transfer" does not take place. They point out that the scholar who is the epitome of the scientific attitude in his laboratory does not necessarily exhibit this same attitude at the polls on election day or in caring for his own health, that the English teacher who exercises meticulous care in correcting themes does not always give the same attention to the selection and care of his clothes—or even to his personal cleanliness. Transfer, they contend, cannot be assumed; it must be taught. Accordingly, the functional educator aims to identify the life-needs of students and the demands of society, and then to organize instruction directly in terms of these needs. The curriculum which he builds includes such courses as home and family life, consumer problems, mental hygiene, personal and community health, applied humanities, citizenship, communications, philosophy of life, and vocational orientation.

This functional approach to general education has at least two major implications for the college and the teacher.

It means, first, that the content of the course must be focused upon the opportunities, demands, and exigencies of daily living, and, second, that the method of instruction must be calculated to develop in the student those abilities—information, understanding, skills of thinking, interests, attitudes, ideals and purposes—which will prepare him for the situations and activities of life. . . . under the newer point of view, life in its manifold aspects sets the objectives; under the older approach subject-matter alone determines the goals.²²

Some who read the literature on the functional approach to general education believe that the functionalists and those who differ with them must have two contrasting goals in mind. They must be seeking to train two highly different types of citizens. A more careful study of the literature and its implications reveals quite clearly that such is not the case. Both the functionalists and those who favor other criteria for the selection and organization

²² Potthoff, *Journal of Higher Education*, p. 74.

of subject matter aim to prepare students for citizenship in a democracy in which they will have opportunity to exercise a freedom of choice and of judgment; both groups aim to prepare effectively to meet the problems and needs of daily living; both groups aim to train students who have significant insights and sets of values.

On these fundamentals of purpose the groups agree. On the method, as has been pointed out, they differ.

After examining these contrasting approaches to curriculum building, Wriston suggests:

So far as I can see, nothing but long experience can resolve the dilemma between two fundamentally different approaches to this question. On the one hand are those who would cling to the traditional disciplines, and on the other are those who would make an analysis of the students' present or future activities and found the curriculum upon the basis of those activities. One can argue it in either direction. Thus it may be held that it is absurd, in laying out the curriculum, not to follow the life pattern of the individual, or it may be argued that any activities analysis is so superficial in its characteristics, is so gross in its deductions, is so little related to the actual processes of each individual student that it is meaningless—often, indeed, it seems as though those who would make an activities analysis are reverting to the old fallacy of the "economic man" that the economist used to dress up for classroom purposes, but who proved to be nothing more than a dummy. Again, on the one hand it may be said that the traditional disciplines are adhered to because the teacher is too lazy to learn a different approach. . . . On the other hand it may be argued that the disciplines have matured through many, many years, that their significant characteristics are quite individual, and that the values of those characteristics may readily be lost if they are stirred up with a great spoon and thrown into other categories which do not clearly open the way for those specific disciplinary characteristics. We have, then, upon the one hand the voice of experience and upon the other a fresh method of approach. One has succeeded measurably, though not perfectly; the other is still in the experimental stage. There seems to be no current solution except to let the two go along side by side with as little mutual recrimination as possible, depending upon our successors, and we hope our betters, to decide an issue that can be settled only upon the basis of a longer experience than we yet have.²³

²³ H. M. Wriston, "A Critical Appraisal of Experiments in General Education," *Thirty-Eighth Yearbook of the National Society for the Study of Education*, Part II, *General Education in the American College* (Bloomington, Ill.: Public School Publishing Co., 1939), pp. 312-18.

We have examined four typical issues in general education—issues with which every college interested in developing a program of general education must deal. These four do not exhaust the issues in general education. They are, however, both representative and comprehensive. These issues include elements of social philosophy (*the few versus the many*), interpretations of psychology (*election versus prescription* and *broad transfer of training versus functional organization*), concepts developing jointly from psychology and human physiology (*intellect versus total personality*), and composite beliefs central to a philosophy of education (*all issues*).

How the Cooperative Study Handled Such Issues

The Cooperative Study sought to achieve progress through the cooperative action of teachers and college faculties who did *not* agree about such issues. In the face of such disagreements, how was it possible to cooperate? Because the Study aimed to improve practice cooperatively, it had to secure agreement on proximate goals and immediate steps toward them. Otherwise, cooperative action was impossible. But joining the Study was not supposed to limit freedom of decision on any issue, either by a teacher or by a college. The Study's problem, then, was to reach necessary agreements on proximate goals and immediate steps toward them without limiting freedom of decision. The further problem was to get as much assurance as possible that these agreements were leading forward instead of backward.

The agreements needed for action were at the level of practical judgment. In any enterprise, persons agree on many such matters immediately without raising any issues of policy or basic philosophy. But issues of policy were almost always raised when two persons disagreed about a particular situation; whenever they were raised, the Study had to do something about them.

Sometimes the apparent issue of policy disappeared when it was carefully stated; persons realized that they had been arguing over words. (The reader may have concluded that some of the issues of policy listed above are really verbal.) Frequently large issues needed to be broken into smaller issues. The Study repeatedly found it useful to differentiate between issues about objec-

tives, about the selection of learning experiences to achieve these objectives, about organization of learning experiences into courses, and about evaluating results in the light of objectives.²⁴ For example, one common issue has been labeled functionalism versus antifunctionalism. These words are, of course, "weighted"; such discussions usually use a good many weighted words. A functionalist might argue: "General education is education for the common life of today—and tomorrow. Let us, therefore, study that life and base our courses upon it—upon the problems our students will face and the activities they will perform. We mustn't depend on transfer of training from traditional liberal arts subjects to take care of the major contemporary problems of students and society." An antifunctionalist might reply: "You will end by teaching trivia. Let's give a thorough education in the fields which the human race has found worth studying over the centuries. Then, if there is any time left, we can add any other things that seem to have been omitted. How to live—today or tomorrow or any other time—depends principally upon insight into the central values of living; for these we must turn to the cultural heritage of the Western World."

Prolonged debate of such an issue in terms like these didn't seem to get anywhere. People just went round and round—the larger the group, the larger the circle of rotation.

Faced with such an argument, the Study's first effort was to *identify separately* a number of different issues. For example, in the course of guided discussion, a group might identify the following separate issues:

Aim—shall we aim at preparation for life or at transmission of the cultural heritage?

Selection of learning experiences (content plus method, in more traditional analyses)—shall we use field trips to industrial plants followed by discussion, or use a lecture, plus reading in *Wealth of Nations*, plus a "great books seminar"?

Organization—shall we organize our course about contemporary problems or use a historical approach?

Et cetera.

²⁴ For a more complete statement of the categories used, see chapter v.

There might be additional problems falling naturally into the usual categories. Thus, in the sample given, transfer of training would merit some attention. Here is a problem where the results of research would need to be brought to the attention of the entire group. The extent to which problems of transfer would arise *both for the functionalist and for the antifunctionalist* might then be analyzed, and techniques by which each could minimize dangers of lack of transfer might be considered.

Sometimes the separate identification of subordinate issues was enough to end an argument. For example, if Mr. X had asserted, "Education must be functional; we must give insight into the problems of our society—problems of war, relations of capital and labor, etc.," while Mr. Y replied, "Functionalism leads to a hodge-podge course—just one social problem after another; we must organize our course around the great forces which clash to produce social problems," then Mr. X was talking about *selection* of learning experiences while Mr. Y was talking about their *organization*. Conceivably, at this point they might find they did not really disagree.

However, in a controversy like the one between functionalists and antifunctionalists, disagreements will not entirely disappear when the separate issues are separately identified. Usually all the separate issues will remain.

At this point, it was the invariable practice in the Study to consider issues about aims first. In the sample under discussion, the issue about aims is: Shall we aim at preparation for life or at transmission of the cultural heritage? Once this is stated as a separate issue, there is the possibility of discussing it more intelligibly. For example, someone will say, "We should aim at both," and someone will remark that it might be possible to do both simultaneously. But then discussion is apt to become quite difficult and abstract if the group seeks a broader formulation under which these two general aims can be subsumed. Even if one is obtained—for example, "growth" in Dewey's sense of the word—it doesn't get the group much further. Having attained an abstract formulation, the group then has to find some way to give it a concrete meaning. At times various groups in the Study attempted to handle problems this way, and some of them succeeded. Usually, how-

ever, this technique was useful only in small and philosophically sophisticated groups.

The characteristic method of the Study at this point was quite different. Philosophically, it involved a switch from intensional definition to extensional definition. In the Preface to *Experience and Education*, Dewey says: "It is the business of an intelligent theory of education to ascertain the causes for conflicts that exist and then, instead of taking one side or the other, *to indicate a plan of operations proceeding from a level deeper and more inclusive* than is represented by the practices and ideas of the contending parties." (Italics added.)

Instead of encouraging debate on preparation for life versus transmission of culture, the Study suggested that teachers collaborate in the following operations:

1. Analyze proposed general aims into more specific aims. Continue analysis until each specific aim can be stated as a *characteristic or type of behavior desired in students*.

2. Guard against inadvertent omission of important specific aims by analyzing students, society, and the potentialities of various subject matters.

3. Seek evidence as to the present status of the students in the college with respect to characteristics judged important.

4. Finally, *study* the results of the first three steps. *Discuss* the results, then, in the light of all the evidence, *make specific value-judgments* as to specific educational objectives. Strive through discussion for consensus on this list of specific objectives.

Many groups actually achieved consensus by this technique. Why? For one thing, they talked the same language because each aim was stated intelligibly as a desired characteristic in students. For another, they were making specific value-judgments about specific aims. Finally, they were all able to look at the same factual evidence. This was *not* a "scientific determination of aims"; aims were determined by value-judgments. But the value-judgments were guided by facts.

By this technique the Study reached necessary agreements on proximate goals without limiting freedom of decision by any other teacher or college. There were some differences of opinion, even at the end of this process. But there was a strong tendency toward

convergence of judgments when this technique was used. Again and again, the Study achieved sufficient consensus to get ahead with cooperative efforts.

But what assurance did the Study have that such agreements were leading forward instead of backward? In the realm of practical judgment, there can be no certainty, only probability. Groups may have judged wrongly in many particulars. But groups in the Study believed that they increased the probability that their value-judgments were valid by stating what was to be evaluated in specific terms everyone could understand, by studying all relevant evidence they could get, and by achieving consensus of many minds through free discussion.

Once a group had agreed upon objectives, it turned to problems of selecting and organizing learning experiences and evaluating the results of instruction. Similar techniques were used for issues in these other fields.²⁵ Groups found that some issues in these other fields disappeared as soon as objectives were *clear*; on those issues which remained groups frequently achieved consensus by operations which became possible because their objectives were *specific*.

Then, what became of the issue between preparation for life and transmission of culture? Did it get lost in the shuffle? In a sense it did, since it was never "faced squarely." In another sense, perhaps the group "solved" it by finding a plan of operations proceeding from a more inclusive level. The plan of operations has just been indicated. It proceeded from a deeper level in that "characteristics desired in students" included both characteristics preparing them for life and characteristics resulting from transmission of culture. In the last analysis such characteristics turned out to be pretty much the same.

No sane "antifunctionalist" wants to leave students unprepared for living; he simply insists that characteristics which Western culture has emphasized are important for living. He only goes wrong if he gets so enamored of some particular product of our culture that he forgets to analyze its educational functions—or if he forgets that contemporary Western culture includes many useful things not previously taught in schools.

²⁵ For a more adequate discussion of operations used in dealing with issues, see chap. v.

No sane functionalist wants to cut students off from Western culture; he merely insists that characteristics important for living must be emphasized when Western culture is transmitted. He goes wrong only if he becomes superficial and sees need for studying the latest strike without seeing the need for penetrating to the forces and value-systems which cause this strike and all other social conflicts—or if he forgets that ideas valued by great men even of the remote past may still be functional.

In a sense, then, the Study solved or resolved the conflict between the functionalist and the antifunctionalist.

Note that the characteristic result of the Study's efforts was a number of decisions concerning what should be done in specific situations. The Study answered the problems concerning proximate goals and immediate aims which it needed to answer in order to proceed with its job.

In a sense, the Study did not answer and did not need to answer issues at the policy level. Groups considered them, but the Study generally ended by devising an operation which transformed them into a multitude of specific issues at the level of practice. Study of specific decisions on these issues might lead to generalizations about matters of policy, but such generalizations were not necessary to the Study's job of improving practice. Particular teachers, particular colleges, and particular intercollege groups took stands on such matters, but the Cooperative Study was not seeking and did not generally obtain universal agreement on such issues of educational policy.

In a very real sense the educational issues which the Cooperative Study answered were not issues such as those between functionalists and antifunctionalists, but issues such as the following:

1. *How* can we agree on valid objectives?
2. *How* can we select learning experiences to achieve these objectives?
3. *How* can we best organize learning experiences into courses?
4. *How* can we best evaluate our results?

The Study's "answers" were ways of operating, not doctrines. The Study seems to have demonstrated anew that, although practical decisions are related to educational policies and to philo-

sophical principles, there is a possibility of agreement and a technique for agreement at a practical level among persons holding widely different educational and philosophic doctrines. The technique which the Study used in reaching agreements is obviously acceptable to empiricists. But it also proved acceptable to rationalists, who used it as a means of turning to experience to give specific content to forms of thought which they had previously established by nonempirical means.

In a democracy, there is need in many cooperative intellectual endeavors for such a technique, since it seems to make possible an agreement on what is actually to be done, even though various individuals and groups may submit *separate but concurring opinions* giving very different rationales for doing it.

Implications

The major tragedy of life is the passive acceptance by man, both individually and in groups, of beliefs which he fails to follow through in consistent action. Our nation claims to believe in equality of opportunity for all—and yet permits the oppression of minorities within our borders. We profess to believe in the value of education—and yet pay teachers salaries which belie the importance we claim for their work. Most tragic of all, the nations of the world solemnly proclaim a united belief in peace—and yet even today fail to make the commitments which will assure the peace in which they profess to believe.

Colleges are equally guilty of inconsistencies. The same college which selects intellectual development as its one central aim supports a championship football team whose intellectual prowess is as difficult to discover as is its intellectual purpose. The college which believes in and purports to provide general education for all takes genuine pride in annually “flunking out” one-third of its freshman class. The college which announces an educational program planned to discover and meet the needs of each separate student offers a prescribed curriculum and makes no visible provision for student guidance and counseling.

The college has an obligation to society—an obligation to provide leadership in developing ideals and in preparing students to assume the responsibilities inherent in citizenship in a democ-

racy. No college can be worthy of its name and purpose if it knowingly makes claims which it is unprepared to meet. Such practices are inimical to the high idealism which our nation has a right to expect from its colleges.

The implications for the individual college of the issues discussed in this chapter are clear.

First, *the college must consider important issues*. In doing this the institution will need to weigh and study each issue in the light of the purposes of the college, as well as in light of its facilities and equipment, its staff, and its students. To fail to deal with an important issue is to lack courage or insight; to take a position without mature consideration is to be intellectually lazy.

Second, *the college must examine and when necessary revise its entire program in the light of its decisions on important issues*. The validity of any decision can be determined only by the degree to which it results in activities which lead to its implementation. Failure to follow through to consistent action on an announced philosophy and decision is intellectually and morally dishonest.

America has a place for and needs a variety of different colleges in educating its citizenry—small colleges and large universities, tax-supported colleges and church-sponsored institutions, colleges for the intellectually elite and those for the masses—colleges differing in purpose, philosophy, and operation. But for one type of college there should be no place in America—the college which fails to define its philosophy or which fails to follow through on its philosophy, once defined.

But there is a further implication of great importance for American democratic education: *Colleges must learn the possibility and desirability of collaborating with each other to improve American collegiate education*. Even though they disagree on their doctrines, they can and should expand the areas of agreement concerning specific characteristics to be developed in students. By expanding areas of agreement in this manner, functionalist colleges and anti-functionalist colleges, Catholic colleges and Protestant colleges, pragmatic, realistic, and idealistic colleges—all the different kinds of college—may yet make their efforts converge toward that education for the common life of American democracy which *general education* implies.

III

The Philosophy of the Study

DURING THE first eighteen months of the Study the colleges worked on individual projects. Although they were valuable, it became apparent to the colleges and to the central staff that a greater return could be secured if considerable attention were devoted to major projects of common concern to all the colleges and of such importance that they might produce results which would be useful to higher education generally. This change in emphasis was really less of a shift than it appeared. Though in the early period of the Study each project seemed to have been treated as a separate entity, actually certain basic ideas underlay the activity and bound the parts of it into more of a unit than appeared at first glance. These ideas may be called, for want of a better term, the philosophy of the Study.

The Development of the Philosophy of the Cooperative Study

Initially this philosophy was certainly not explicit. Furthermore, in so far as it could actually be seen at that time, it was not shared by all participating in the Study. Different institutions had different points of view, and the diversity of opinion among instructors was still greater. But through work on various basic points the common ground of agreement was extended. The increased agreement came in several different ways. Some progress was made simply through the removal of semantic difficulties. In regard to a commonly used phrase, "the needs of students," for example, some felt that the term meant either anything in the world or nothing at all, and consequently they considered it meaningless and useless. Others understood "needs" to mean something to which they objected (say, "the whims of students") and hence opposed the concept as they understood it. On the other hand,

some teachers felt that the term stood for a very important concept, and they wished to organize the entire work of the Study around it. While this confusion existed, agreement was naturally impossible. As the group worked together, however, the disagreements arising from mere verbal confusion were obviated.

More important was the agreement which came from common work and discussion. As people participated in these meetings, they realized that they had been overlooking or underestimating certain important factors which justified points of view they had formerly opposed; sometimes they saw that certain points did not really contradict their own views, but were supplementary to them. In short, on a number of points a real meeting of minds took place, and an explicit philosophy held in common developed.

This common philosophy naturally had certain limitations. In the first place, it did not attempt to be complete; attention was given primarily to those matters most pertinent to the work at hand. Second, because the Study as an organization was committed to respecting the particular philosophy of each college and instructor participating, what is here called "the philosophy of the Study" is not so much *a philosophy* as a structure within which a number of educational philosophies, in the stricter sense of the term, could cooperate with mutual profit. Finally, the elements of this philosophy were not accepted by all teachers in all colleges. Instructors who rejected the propositions implicit in the concept of general education or in any attempt to study it cooperatively could not accept this point of view. The philosophy of the Study, therefore, means the points on which those who participated most actively were able to agree.

Many people quail at the mere mention of philosophy. They feel that it can consist only of airy abstractions which can make no difference in practice and that any attempt to state an educational philosophy is mere "busywork." This is not the view taken in this report. As the following pages will show, it is assumed that any satisfactory philosophy must make a difference in practice and that any practice is meaningless without an underlying philosophy. Because of the importance of philosophy in the Cooperative Study it must be briefly stated.

The Role of Objectives

One basic assumption of this philosophy was the belief that higher education does not, or at least should not, exist merely as a self-perpetuating institution, but rather that it seeks to accomplish certain purposes which are the objectives of education—what education tries to do. Similarly, in each subject field and likewise in any small segment of a single course in that field it is impossible to make intelligent plans, to prepare suitable materials, to provide valid examinations, or to do effective teaching unless these activities have some purpose and unless these purposes are clear. Because of this fundamental importance of objectives, one of the first tasks of the Study was to clarify its position in regard to them.

OBJECTIVES ARE DELIBERATELY WILLED

The first point upon which general agreement was reached was that objectives should be deliberately willed. It is not enough for a teacher (or college) merely to do what he has been doing; if he continues to do what he has been doing, it should be because this sort of action produces the results desired, not merely because of habit. Yet teachers often found that they had been doing things, not because they chose, but simply because they happened to be doing them. A few courses had merely been inherited from predecessors. Sometimes a course had simply been adapted from one which was popular or well publicized at a neighboring institution or because courses of this type had been thought to represent one of the new trends in education. In these cases, the educational objectives certainly were not willed, and sometimes were none too clear. Situations like these deny the whole concept of rational educational development.

OBJECTIVES SHOULD BE CLEARLY STATED

The second step naturally follows and has been partially anticipated in the preceding paragraph: the objectives should be *clearly* known and, usually, *explicitly* formulated. The whole business of stating objectives had long been a sore point with college teachers. Some felt that there was an insult implied in the request to state objectives. If an objective represents what one is trying to do,

then the request to state objectives seems to imply that teachers have not known what they were doing during the past five to fifty years they have been teaching. This implication was obviously not intended. Had faculty members been wholly unaware of what they had been doing, they should, of course, have been dismissed long before, rather than asked to make up their minds at this late date. The inference intended was that these instructors could profit enormously by making their objectives more explicit and precise.

What explicitness involves can easily be seen. Some instructors who showed the greatest surprise at being asked to state objectives replied: "Why, my objective is to teach mathematics"; or "I try to introduce my students to great literature"; or "My purpose in this class is to give students some understanding of the basic social institutions"; or "I try to teach the major principles of physics." Frequently a statement like this was followed by the query, "What other objective could I possibly have?"

Yet if these same instructors were asked, "Is this all you are trying to do; and, if so, why should students in general education have this kind of experience?" a few teachers, to be sure, would agree that they were interested solely in imparting this particular subject matter and would claim that for the student to acquire this material was a sufficient good in itself. A much greater number, however, vehemently insisted that they did not wish their students to leave the class with only objectives of this sort obtained; they wanted the students to get much more. Their reasons for teaching their subject and for believing that the students could profit from it were that this sort of work would: "broaden the student's interest and lead him to a richer life," "would open up to him the possibilities of scientific method," "would introduce him to his cultural heritage," "would aid him in solving some of his problems in life," "would introduce him to new types of experience and value," or "would aid him in developing a satisfactory philosophy and mode of life," and so forth. All the readers of this list will wish to add or to emend, but they will recognize what these teachers had in mind.

In short, college teachers, in addition to the objectives immediately relating to the subject matter of their courses, had many other aims which they often called their "broader" objectives—

"broader" because they were thought to be indirect outgrowths of work done with greater directness or because teachers in other departments dealing with different subject matters were also concerned with them.

Unfortunately, the fact that objectives are potential or "are in the back of the instructor's mind" does not mean that they are automatically achieved by the class. On the contrary, there is considerable evidence to show that these larger outcomes are not inevitable by-products of the teaching of facts in a particular field. They are much more likely to be attained if teaching is directly aimed at them. Hence, an instructor cannot simply teach his material and hope that all possible objectives will of necessity be attained by the class. If allegiance to those broader objectives is to be more than lip service, their meaning must be clear, instructors must devise ways in which these objectives can be furthered most effectively, and, then, the degree of success in aiding students to achieve them must be carefully appraised. As a result, teachers soon realized that an explicit statement of objectives was not merely a desirable starting point, it was a necessary one.

OBJECTIVES STATED IN TERMS OF BEHAVIOR

Once it was agreed that the formal statement of objectives was desirable, the next question to arise was, "What form should these statements take?" It was soon evident that this question of form was more than a mere matter of method, and was very closely related to the much more basic problem, the usefulness of these statements.

Often at early intercollege committees and workshops, when the question of objectives was raised, someone would exclaim, "I wrote out my objectives two or three years ago for our dean. Probably that statement is somewhere in his files. If you think it would be of any use, he might be able to find it and send it to me." Obviously, this teacher had not found this statement of objectives helpful in teaching during these intervening years, and, when coming to work on a problem connected with the course, had not considered the statement worth bringing. Certainly in these cases, objectives had not been serving to guide teaching. Yet if these

statements had not been used, this neglect often resulted from the fact that they were neither useful nor usable. And this lack of utility frequently arose from the form (in its widest sense) in which the objectives had been stated.

The experience of others had shown that the most useful objectives are those stated in terms of student behavior. (Needless to say, "behavior" is not limited to "overt behavior"; what a student feels or thinks is also included.) This form has a value of putting the emphasis, not on the teacher's intentions or on the subject matter used, but on the effects produced in the student. As a result, this form helps focus attention on these larger outcomes.

Stating objectives in terms of student behavior also has the advantage of leading directly to operational definitions; and definitions of this sort have proved to be especially useful in dealing with those complex objectives which are most important to college teachers. Take, for example, the objective "the student should appreciate great works of art." In the present state of aesthetic theory, "appreciation" means many different things to different people, and consequently cannot be meaningful as an educational objective until it has been more precisely defined. One good means of securing precision is the operational definition. The teacher who wants the student to "appreciate" should ask himself, "According to my understanding, what does a student do who appreciates?" One teacher's first analysis was as follows:

The student should be able to appreciate actively the arts through familiarity and practice in analyzing them for the purpose of arriving at critical judgments. He should grow in:

1. The ability to perceive relationships between art functions and art forms.
2. The ability to express himself sincerely and adequately in conversation and writing about the arts.
3. The ability to analyze art functions by a scientific study of an art product, of the problems and activities of the artist in working out the art form, of the impressions of the art product on an audience, appreciator, or critic.
4. The ability to understand the evolution of art forms from antecedent forms which, influenced by geographic, economic, and social factors, make new art forms by fulfilling human needs.
5. The ability to perceive, interpret, and enjoy art practices of past

civilizations; to realize that art pieces of past civilizations were also functional and communicated often the ideas and feelings compatible with the social structure which the leaders were trying to build.

Since this analysis was a first effort and was later considerably revised by this instructor, it is intended to serve merely as an illustration, not as a model. Possibly many readers will not agree with this particular analysis; but the very fact that disagreement is possible indicates the clarity which has been gained. Had this teacher said merely, "I want my students to appreciate," few readers would have disagreed with him; but once he has begun to analyze the concept, "to appreciate actively," one can see more clearly what he means and then can agree or disagree with it.

THE RELATION OF OBJECTIVES TO NEEDS

The process of stating objectives in terms of student behavior is also valuable because it points sharply to one important fact about the nature of objectives. To have educational objectives is to seek to produce certain desirable changes in students. This statement is trite, but it has implications which are frequently lost sight of—with disastrous results. Consequently, this statement deserves careful consideration.

The meaning of the term "changes" is obvious. Education attempts to make people different in some respects, be it in regard to the information they have, the abilities they possess, the attitudes they hold, the activities they carry on. Making people different implies that the college will not concentrate its efforts upon characteristics that have already been acquired by the students, nor that the college will be satisfied with its achievements if students, no matter how high their status may be, have made no progress between the time they entered the college and the time they graduated. Since students rarely enter college with no knowledge, no skills, no habits or attitudes in a given field, it is important to discover what their present status is in respect to these characteristics so that the college will not aim at things already possessed, but seek to bring about desirable changes in them. Therefore, anyone who states an educational objective should be expressing an ideal or desirable status for the student which is different from the student's present status.

"The Needs of Students"

It is from this distinction that the Study developed its definition of "an educational need" by defining a need as "a gap"—a disparity—between the characteristics which the student ought to have and those which he now possesses. To illustrate again with a simple mechanical example, if a student ought for certain reasons to be able to type at the rate of fifty words a minute and is now able to type at the rate of only thirty, then one could formulate a need, that the student should be able to type twenty words a minute faster. Because in our view educational needs can be determined only in terms of the educational objectives established (in this case, "the student should be able to type fifty words a minute"), the meaningful and adequate statement of objectives becomes even more important.

THE PROBLEM OF VALUE-JUDGMENTS

If objectives are thus one important factor in determining educational needs, how can one best arrive at them? If to adopt an educational objective is to assert that something ought to be, "that students should be able to do" something they cannot now do, then the statement of an educational objective implies that the person stating it has a definite idea of what is desirable, of what ought to be, of what the student should be able to do. How does a teacher decide what is the ideal state of affairs?

At the beginning of the Study, some believed that this judgment was purely arbitrary, that the teacher should decide on the basis of his own opinion and experience what ought to be. Other teachers hoped that it would be possible to make these judgments with complete objectivity. For our purposes neither of these extreme positions was tenable. The philosophically minded reader will recognize this treatment of the problem of values as somewhat cavalier. In part, this attitude is a result of the relativism inherent in our situation. Nearly every shade of opinion in regard to the problem of value was represented in the Study, which was committed to the policy of allowing complete autonomy to colleges and their faculties. As usual, therefore, we sought a frame in which all could work.

On the one hand, judgments reached by the pure fiat of the instructor or institution run the risk of being based on unexamined tradition, misapprehension, narrowness of view, or of being wholly out of touch with reality. Under these circumstances one could not place much confidence in a statement of educational objectives formulated as an arbitrary act of will. On the other hand, even the group who believed that all problems of value should be objectified admitted that in the present practical situation it was impossible to secure all the data necessary for this objectification and, consequently, that some subjective judgment had to be admitted.

The position came to be rather generally accepted, therefore, that as much information—factual data—as is possible in the particular situation should be in the possession of the person making the judgment; the better informed he is, the better his judgments will be. Judgments about objectives should not be calmly tossed out of the depths of one's academic armchair. Preliminary study is necessary.

Sources of Objectives

The information which can be helpful to one seeking to state objectives comes from a wide range of sources. The need for a wide range of information grows out of the fact that college students are complex personalities and the society in which they live and develop is also complex. Consequently, decision on those characteristics to develop in students which will make them most effective and desirable as individuals and as members of society requires consideration of various factors relating to the individual and to society. In securing a comprehensive view of possible objectives many of the instructors in the Study found the following sources helpful.

SOURCES OF INFORMATION

Facts known about students and alumni.—Part of the evidence which can help one to formulate valid aims comes from careful observation and study of the students and alumni and of the society in which they live. If one knows the kinds of person they are, the purposes they have, the difficulties they meet, and the like,

then one is better able to judge what would be a desirable status for them.

Facts known about society.—The needs of society, too, and the demands which our society makes upon its members must be considered in determining the objectives of education and the needs of students. The explicit differentiation between the facts about the students as individuals and as members of society is not intended to imply that there is a clear distinction between the needs of the individual and the society in which he lives. On the contrary, the consideration of any need of society will reveal a corresponding need of the individual, and vice versa. The use of this distinction in obtaining data is only because many people tend to think of some needs as predominantly personal. To prevent omissions, studies should be made from both standpoints.

Facts known about the nature of learning and of human growth and development.—As information increases in regard to the physical and psychological requirements of young people in our society, this information can sometimes suggest desirable objectives for education.

The opinions of specialists about what their fields of subject matter can contribute.—Often fields of subject matter have potential contributions which are not being fully utilized. In setting up an educational program, consequently, one should consider the opinions of experts in these fields concerning such possible contributions.

One's general philosophy and the philosophy of education.—The value of this criterion should be so obvious as to demand little comment. The kind of view which one has of life, of the nature of man, and of his purpose here should naturally be the guiding principle of one's educational philosophy and, hence, of one's educational objective.

The great cultural and educational tradition.—One can sometimes find worth-while educational objectives by studying those which have served as the objectives of education in the past.

The use of these six sources can give a variety of information relating to the individual and social needs of students. To interpret this information as educational objectives, that is, as characteristics to be developed in students, requires a more systematic

analysis of the data so that the implications regarding necessary changes in students can be systematically noted. There are essentially two dimensions which must be considered in connection with any educational objective. The first is the characteristic of the student's behavior which is desired to be developed, and the second, the area of life-experience in which this behavior is to operate. Thus, it is not enough to express an objective as "to teach students to think." Further definition would identify the type of behavior to be developed, namely, thinking. Psychological investigations have shown that for most students to apply such behavior effectively they need to have some practice in thinking about the kinds of problems in the particular areas of experience where thinking will be necessary for them in their future lives. Hence, a complete statement of the objective would define not only what is meant by thinking but would also indicate the areas of experience in which such thinking was to operate. For example, it might indicate that the student was to learn to think critically about social-economic problems or utilize critical thinking in the formation of a philosophy of life, and the like. To get such objectives into this form it was necessary to develop a systematic plan of analysis of the data obtained from the foregoing sources.

AN ANALYSIS IN TERMS OF THE STUDENT

What are the activities which students and alumni perform in the society in which they live? It is necessary to remember that "activity" includes thinking and feeling as well as doing. Naturally this activity cannot in itself dictate educational needs since it represents the present rather than what may be the desirable state of affairs. Nonetheless, it can give a realistic basis on which to build a conception of the ideal.

What purposes do students and alumni have in performing these activities? This information serves not only to explain the activities which students and alumni perform, but will also serve to indicate unrealized or thwarted purposes which they have, yet cannot accomplish. These unrealized purposes can often suggest valid objectives for education. Throughout this discussion, but especially here, the reader must remember that all needs suggested by this process may not necessarily be educational needs. That is,

the college will probably decide not to assume sole responsibility for bringing the actual state of affairs up to the ideal in all respects, but will leave to the church, the home, and other agencies the responsibility for meeting some of these needs. This process merely enables the college to determine its responsibilities in the presence of a complete list.

What difficulties do students and alumni meet in attempting to perform these activities and to achieve these purposes? In so far as the purposes and activities are judged desirable, these difficulties point rather directly toward needs.

What are the characteristics, qualities, or resources which students will need in order to overcome these difficulties and so to perform these activities effectively and to achieve these purposes?

Hence, in so far as the activities and purposes are conceded to be worth while, the characteristics which will enable the student to overcome his difficulties are *the student's specific needs and the specific objectives of education*. An analysis like the preceding is useful because it places the specific objectives of education within a meaningful setting of human purpose. But because of the importance of these specific objectives, it is necessary to present a possible classification of these characteristics. A number of classifications are possible of which the following is only one, but a useful one.

1. *Information*.—What does a student need to know in order to achieve particular purposes, or what information will enable him to overcome some of the difficulties he now experiences? Here information is used in the broadest sense to include not only knowledge of factual data but also knowledge of important terms, theories, hypotheses, trends, schools, and movements.

2. *Attitudes and beliefs*.—Although distinction can be made between what these two terms imply, it has generally proved satisfactory to group them together, chiefly because different people make different distinctions between them. For example, some consider "attitude" the more general concept and believe that one may have an attitude of belief, of disbelief, or of skepticism. In short, according to this view, beliefs are a subclass within the larger class of attitudes. Others make a distinction between "atti-

tude" as a tendency to act and "belief" as a rational position which the person may hold intellectually without any inclination or impulse to act. Those participating in the Study have made still other distinctions which seemed particularly adapted either to their personal habits of thinking or to the problem at hand. Whatever precise definition is given to this area and regardless of the special distinctions made within it, it is sufficiently different from the other areas outlined to be significant.

3. *Interests*.—What interests need the student develop if he is to overcome his difficulties and to achieve his purposes?

4. *Abilities and Skills*.—What abilities and skills need the student develop if he is to overcome his difficulties and achieve his purposes? Some teachers have found it useful to make no distinction between abilities and skills. Others have preferred to define them as follows: "Skills" are conceived of as being more mechanical or motor in their nature; "abilities" represent the less motor and more mental operations.

5. *Appreciations*.—As was indicated earlier in the discussion of objectives, appreciation is a complex matter. The student who appreciates a work of art, for example, has certain attitudes toward it, certain interests and knowledge, and so on. Appreciation, therefore, may be viewed as a complete synthesis of the characteristics already mentioned. It deserves enumeration, however, because all these characteristics can exist without this synthesis being effected. Yet this totality of reaction is of primary importance in aesthetic fields.

This sort of list has been found helpful in considering objectives. As is evident from the discussion, the lines of demarcation between the different sorts of characteristics are not rigid; and some have used rather different definitions from those of others. It has been found, however, that the law of diminishing returns soon sets in if too much attempt is made to formulate with extreme precision a universally acceptable statement of the difference between, for example, a belief and an attitude. The purpose of these lists is to be suggestive to a teacher or institution in planning objectives. If these catchwords serve to suggest some desirable trait, then they have served their purpose whether that trait is ultimately labeled a belief or an attitude.

THE AREAS OF EXPERIENCE

There is, however, still another "dimension" in terms of which educational objectives must be considered, that is, the broad areas of living within which the purposes, activities, and difficulties of students operate. The complexity of human life being what it is, the possible schemes of classification are literally infinite. Furthermore, because of the interplay of factors, the categories of any single scheme chosen will not be mutually exclusive or "water-tight" compartments. As a source of suggestion the following scheme has been found useful:

1. Physical health
2. Mental health
3. Philosophy of life and religion
4. Aesthetic experience
5. Intimate relationships
6. Socio-civic relationships
7. Economic relationships
8. Recreation

A Chart to Facilitate Discovery of Needs¹

In thinking about needs, it was found advantageous to prepare a chart in which these fields of human experience are listed in a left-hand column, while types of personal characteristics are arranged across the top of the page. Intersections then suggest needs. For example, what interests does the student need in the field of aesthetic experiences? What abilities does the student need in connection with his philosophy of life? What information does the student need about recreation?

Such a chart serves best as an auxiliary thinking machine to suggest ideas. Whenever it stands in the way of thought, it can be disregarded. Whenever it makes thinking more inclusive, it can be used.

One can begin the use of the chart from any one of a number of points. At each point one can consider it both with reference to the individual student and with reference to groups in society. One can see some activity which students or social groups per-

¹ The following discussion is based on the booklet, *An Approach to "Needs" in the Humanities*, issued by the staff in the humanities.

form, some interest which students or social groups have, some weakness or difficulty which students or social groups experience, some belief or attitude characteristic of students or social groups. No one instructor is likely to be interested in this whole range of relationships, but a teacher may be led to notice needs

Areas of Human Experience	Activities (What People Do)	Purposes of Activities: Values Obtained from Activities	Difficulties Faced in Achieving Purposes	Information Implied	Attitudes Implied	Interests Implied	Appreciations Implied	Abilities Implied	Skills Implied	Etc.
1	2	3	4	5	6	7	8	9	10	Etc.
Physical Health	A									
Mental Health	B									
Philosophy of Life and Religion	C									
Aesthetic Experience	D									
Intimate Relationships	E									
Socio-Civic Relationships	F									
Economic Relationships	G									
Recreation	H									
Etc.	Etc.									

FIG. 1.—Chart to facilitate discovery of needs of students.

which would otherwise have escaped his attention. Even if he is not led to the realization of any previously unrealized need, he may be led to make his instruction more realistic and his thinking about the needs of students considerably more concrete and more inclusive than it would have been without the chart.

It is obviously not necessary to fill every blank on the chart. But

a blank stands out as a sort of challenge, and the teacher who considers whether it should be filled is often aided in his thinking. The chart may lead the teacher beyond the field of human experience with which his subject is traditionally and most obviously concerned to other important fields. For example, the teacher of science may see that in addition to contributing to physical health and economic relationships, he can easily make valuable contributions to philosophy of life, recreation, and socio-civic relationships. The chart may also lead him beyond the informational objectives, of his subject to other objectives equally important. For example, the social science teacher may see that, in addition to teaching the facts about social institutions, he can easily make valuable contributions to the student's interests, attitudes, skills, and abilities. Not that good teachers lack consciousness of these possibilities; the chart is merely a device for helping them quickly to locate many or all of the important possibilities.

HOW THE CHART MAY BE USED

A questionnaire given to students brought forth the following response concerning music: "I often wonder what I am listening to and how I should determine an appreciation." In this case, emphasis is on the difficulties which the student encounters in listening to music.

First, the student has difficulty, as he none too coherently expresses it, in "knowing what I am listening to." Entering the chart at column 4, we can cross through columns 5 ff. to see what characteristics this student should acquire to overcome his difficulty. What *information* will help this student—knowledge of some of the common types of meaning which music seeks to convey, acquaintance with the chief types of music, or familiarity with the principal musical forms? Is one of the *attitudes* he needs a habit of careful and thoughtful listening? Will *ability* to pick out and to follow a musical idea or to recognize a musical form make his listening more meaningful? Will *skill* in reading music or in playing some instrument, even in subamateur fashion, assist him? All the specific characteristics which we find by this process are possible needs of the student if surmounting his difficulty in "knowing what he is listening to" is a valid objective.

A similar procedure can be followed in regard to this student's problem of how to determine an appreciation, and different needs would possibly appear. For example, for information in this case he might need an acquaintance with the chief canons of criticism and some ability to apply them to a particular work. On the other hand, a certain overlapping of needs might appear since here, too, a familiarity with the principal musical forms would possibly give him a better understanding of what the composer was trying to do.

Thus far, consideration has mainly been given to the difficulties which the student meets (column 4) in carrying out his activities (column 2). No mention has been made of the purpose behind these activities. The student has said nothing about his purpose in listening to music or his reasons for trying to appreciate it. Perhaps he himself does not know exactly, and one possible need is a clarification of his reasons for carrying on this activity. Does he listen because he senses a social pressure, because of his belief that all "nice people" listen to a certain kind of music? Does he listen because of some emotional urge within himself? Or, is music simply thrust upon him by the radio so that he listens without purpose and almost without volition?

The exploration of the student's purpose affords us an opportunity of descending through the horizontal rows, A, B, C, etc. Does the student listen to music for the aesthetic experience (D), or simply for recreation (H)? The clinical use of music has demonstrated clearly the possible relationship of listening to mental health (B), even if only to the extent of losing oneself in music at times of stress or fatigue. One's attitude toward music as one of the arts may well play a part in one's philosophy of life (C). Or the gathering of family or friends to hear, for example, the Metropolitan Opera broadcasts may involve certain social relationships (E).

Having thus come down through the rows, we may want to cross through the columns again. For example, if the student is listening for the aesthetic experience (D), the information (5) he will need is represented on the chart by the square D5. Use of this "thinking machine" will then serve to remind one that the material to be filled in mentally at D5 may well be different from

what one would enter at *H5* when one considers the knowledge needed in listening for recreation.

Additional illustrations will readily suggest themselves. A teacher of philosophy who has found in his students the *attitude* (or belief) that there are irreconcilable conflicts between science and religion may wonder whether such an attitude should ever be considered satisfactory and whether the particular students in his class have adopted it after careful thought on the basis of adequate understandings. Turning to the chart, he may be aided in his decision on the first point by considering this attitude with reference to various fields of human experience, asking himself: "What does this attitude mean for mental health, for philosophy of life, for social adjustment?" He may be aided in his decision on the second point by considering the attitude with reference to various types of student characteristics, asking himself: "Is the student's decision based upon adequate knowledge about science and religion, sufficiently deep appreciations, normally broad interests in both fields, enough skill in the techniques of philosophic thinking? If he decides to do nothing about the situation, the chart has helped him decide. If he decides that he should do something, the chart has helped him diagnose student difficulties and determine what to do.

A teacher of English composition may collect evidence about the *difficulties* which his students experience in their own writing. He may then use the chart to help him estimate the importance of these difficulties by considering the difference they would make in the writing the student is likely to do in relation to each of the fields of human experience. If he decides they are important enough to merit attention, he may conceivably base an entire remedial course upon these difficulties, using the chart from time to time to suggest bits of knowledge, attitudes, and the like which will help to overcome the students' difficulties.

A teacher of literature, finding that high school instruction has left his students with an aggressive *disinterest* in poetry, may or may not be satisfied with this situation. Consulting the chart, he may be led to consider this disinterest with reference to the students' aesthetic experience, recreation, social life, and other phases of their experience. If, as a result of such consideration, he de-

cides that he should do something about the situation, he may look at the chart again in order that it may suggest information, attitudes, appreciations, skills, and so forth, which will affect the students' interest in poetry. Perhaps he may look at these with reference to a number of different fields of experience, considering the skills needed if poetry is to be a recreation, the skills needed if it is to be an important aesthetic experience, etc.

It is possible that a chart of this sort may be exceedingly useful to some teachers, yet almost useless to others. People seem to differ widely in the usefulness they discover in graphic devices. The teacher who after careful consideration finds that such a chart "cramps his style" instead of helping his thinking should unquestionably ignore it. The important thing is not to use any particular device or thinking machine; the important thing is somehow to arrange courses which will give students the characteristics they must have if important personal and social needs are to be met.

There is nothing mystical about the chart. It does not, of itself, determine objectives; it only suggests possible objectives. We have devoted this amount of space to it for the following reasons. (1) It is, in a way, a graphic summary of this method of work which we have called "the philosophy of the Study." (2) It indicates the general area which we believed must be considered in evolving a satisfactory program of general education. (3) It shows the scope of our exploratory work. Teachers and colleges had hypotheses which involved various areas of this chart. They were interested in determining how particular kinds of difficulty could be overcome, what characteristics students needed in order to function effectively in certain areas of living, how the scope of existing courses could be broadened, and the like. (4) It indicates how the part of this total area which this present report touches is related to the whole. (5) It serves as a frame of reference for some of the projects and trends reported later by indicating the use made of terms like "characteristic" and by showing the relations existing between projects which might otherwise seem disconnected.

By the use of this chart and other devices many instructors were able to get a comprehensive view of some of the possible objectives of general education. The next question was, "On which

of these objectives should the Study concentrate as matters of common interest?" The answer to this question was reached by instructors and staff members in each major field, that is, in the humanities, social sciences, natural sciences, and student personnel. Their decision to work upon certain objectives of common concern resulted in one or more major projects in each of the fields. These major projects are described in the following pages.

Individual Projects in the Colleges

THE COLLEGES participating in the Cooperative Study in General Education were all conscious of the critical need for developing effective programs of general education that would both provide a more intelligent citizenry and also would give more meaning and significance to the life of the individual student. They were not agreed, however, on the most satisfactory answers to the issues faced in the development of general education programs. The colleges in the Study were purposely chosen to represent a variety of educational situations. Each institution in the Study retained complete autonomy of action: the responsibility for making decisions, developing plans, and effecting changes within the individual institution was explicitly invested in each college. As a result the Study began work with several hundred problems and projects which were of immediate concern to individuals and groups in a particular institution. During the first eighteen months of the Study most of its energies were devoted to working on these various problems of individual institutions. This involved a considerable division of effort on the part of the central staff, and later in the Study the primary attention was directed toward certain common projects. Nevertheless, a good many particular developments took place in the several colleges of the Study which were assisted by the staff and facilities of the Study that made some contribution to the improvement of general education in the colleges concerned. A brief description of a sample of these projects indicates the way in which the Cooperative Study assisted in individual projects of this sort and also the kinds of improvement that were made in the on-going activities of the several colleges before they undertook cooperatively to work upon the major projects of the Study.

A number of these projects involved formulating or clarifying the objectives to be aimed at in particular courses offered for purposes of general education. For example, at one institution a survey course in the social sciences had been offered for several years before the Study began. One of the projects undertaken at this institution was to re-examine the objectives of this social science survey course in order to set up objectives that would have most significance for general education and might properly serve as a sound basis for the selection of materials and the working-out of the course designed to attain these objectives. In pursuing this project, the first point at which the Cooperative Study provided assistance was at a regional conference of social studies teachers from the cooperating colleges in or near Ohio, held on the campus of Muskingum College in 1939. At this conference some of the conflicting types of objectives for social studies courses were discussed. Then a member of the central staff outlined a possible procedure for a systematic reformulation of objectives. Representatives from one of the colleges were impressed by the fact that their course had been in operation for several years and that there was still some confusion and uncertainty about the objectives to be attained. After some correspondence with the central staff a fellowship was arranged for one of the instructors of the social science course to spend six months working with the central staff and visiting certain other institutions in order to develop a more satisfactory set of objectives together with suggestions for materials to meet these objectives.

At the offices of the central staff a series of steps were agreed upon for the systematic consideration and formulation of objectives. The first step involved an examination of recent social data throwing light upon the demands that contemporary society is making upon college graduates in the field of the social sciences. This included an examination of data regarding political, social, and economic problems; data regarding the responsibilities of the contemporary American citizen; data regarding the deficiencies of the contemporary adult in the social field. An examination of data of this sort brought to the fore a number of possible objectives for the social studies. These were recorded as possible objectives by the instructor.

A second sort of investigation was undertaken by the instructor to obtain evidence regarding the students actually enrolled in the social science survey course in his college. Through an examination of their previous tests, through a questionnaire regarding their interests, experiences, and problems, and through a more detailed study of a dozen individual students, the instructor was able from this source to get a number of further suggestions regarding needs of these students which a social science survey course might be expected to meet. This source provided a second set of possible objectives.

In the third place, with the aid of the library available at the University of Chicago and a special collection of materials assembled by the staff of the Study, the instructor was able to examine a series of reports of special committees and of individuals proposing objectives which a social science course should attain. Material examined included reports such as that of the American Historical Association's Commission on the Teaching of Social Studies, the report of the Commission on the Secondary School Curriculum entitled *The Social Studies in General Education*, Robert S. Lynd's *Knowledge for What?* and so on. These reports suggested certain additional objectives that might possibly be attained by a social science survey course.

It was apparent that no one course could attain all the objectives obtained from these three sources. Some of the proposed objectives were contradictory, some relatively unimportant. The total list was far too great to provide an effective series upon which to concentrate the aims of a course. This led the instructor to formulate a statement of the educational philosophy of the college so that it might be used as a screen through which to sift these possible objectives and to select the few important ones that would serve as a basis for developing the course. In formulating such a statement of educational philosophy, the instructor met with other members of the staff of his own institution and worked with an intercollege committee on the social studies. He was also referred to a number of books and articles that served to raise some of the philosophic issues and suggest positions that need to be taken in resolving these issues. Eventually he was able to formulate a statement of educational philosophy that was satisfactory both to him-

self and to the college staff. He was also able to use this statement as a means for selecting a few major objectives that were in harmony with the educational philosophy, that were relevant to the demands society makes upon college graduates, that represented gaps in the present development of students in the college, and that in the opinion of social scientists could be attained by effective social science instruction. This illustration is only one of a number of cases in which the Cooperative Study provided a stimulus for the re-examination of objectives and provided an opportunity for such a reformulation to be made. The central staff of the Study also contributed by suggesting a method of attack upon the problem, providing helpful facilities, and criticizing and counseling at various stages of the investigation.

A second illustration of the way in which the Cooperative Study assisted in an individual project is chosen from projects having to do with the selection and improvement of content for a course offered for purposes of general education. A teacher of literature in one of the colleges described the purpose of his study as: "Many teachers of literature believe that the reading and study of literature provide valuable experiences for college students but appropriate proof of the value of these experiences is lacking. I want first to describe as specifically as I can the ways in which the reading and study of literature and the study of propaganda (which is closely related) may further some of the objectives of general education. This description should take the form of a discussion of specific materials and methods of instruction and of the effects upon students anticipated from the use of these materials and methods. Second, I want to plan one or more experiments to measure the effects of the procedures described." This literature instructor became interested in this problem because the newsletters and conferences sponsored by the Cooperative Study emphasized the need for careful evaluation of work going on in the colleges in order to determine the courses and procedures which are effective and those which needed considerable improvement. He, too, obtained a six months' fellowship to work intensively in the offices of the central staff and with the advice and counsel of the central staff. The first step he undertook was to describe what happens when people read or study literature. This description was de-

veloped from three sources: analysis of students' reports of experiences in reading fiction, poetry, and drama; statements by experts in the field of reading, psychology, and aesthetics; and a description of the experiences then being provided by a course he was offering in propaganda analysis. The last information is relevant because literature and written propaganda achieve many similar effects in similar ways.

After obtaining a fairly complete description of reading experiences he was able to put this description to five uses. In the first place, since some reading experiences were more common than others, the description indicated where the students were when they began the course in literature. In the second place, the description provided a list of possible purposes or satisfactions which a reader may seek. When the instructor knows in advance of instruction the satisfactions usually provided by specific reading materials, he is able to plan or direct the course more effectively. In the third place, the description provided a list of experiences in reading from which the instructor could select those he wished to emphasize. In the fourth place, the description suggested class exercises and teaching procedures. And, finally, the description provided a list of reading experiences for which tests and other instruments of evaluation were planned. The instructor found that students were ready to be interested in basic problems which concerned them, ready to become personally involved and acutely concerned. Processes of personal involvement do not occur until the student himself—his present feeling, belief, judgment—is made the center of attention. This study of the ways in which the students react to literature provided a direct basis for replanning the course. Again it will be noted that the contribution of the Study was largely in stimulating a consideration of the problem, in providing opportunities and facilities for work, in giving guidance regarding the technique of attack, and making criticisms and suggestions as the study proceeded.

A third illustration is chosen from projects involving the improvement of instructional methods. An instructor in science in one of the cooperating colleges had for a number of years been teaching the course by giving three lectures a week and providing two long laboratory periods for individual work each week. At the first

summer workshop there was a good deal of discussion on the part of the science teachers regarding the effectiveness of this common pattern of instructional procedure. Some of the possible limitations of the lecture method were pointed out, such as the possible duplication of material that could more easily be read by the student, the possibility that the student is not comprehending points in the lecture and without any immediate reaction from the student the instructor has no immediate check on this, the desirability in a science course of stimulating the kind of systematic analysis and interpretation commonly called "scientific method" which is more directly done by Socratic dialogue and discussion than by lecture. At the workshop some of the participants also criticized much individual laboratory work for purposes of general education as being less efficient than demonstrations and motion picture materials. Growing out of this workshop experience the instructor decided to experiment with discussion groups in lieu of lectures and demonstrations, and motion pictures in lieu of individual laboratory work. After some correspondence with members of the central staff a general design of the experiment was set up. Members of the central staff aided him in planning and constructing tests needed, in checking the values gained by the students under the two methods of instruction. So far as possible the two groups were similar. They had approximately the same average on the American Council Psychological Test and the same scores on the science tests given at the beginning of the course. At the end of the first semester the two groups were tested again. Then the group which had been following the pattern of lectures and individual laboratory during the first semester were shifted to discussion groups and demonstration work during the second semester, while the group that had been using discussion methods and demonstrations during the first semester followed the traditional pattern of lectures and individual laboratory work during the second semester. The students were tested for their knowledge of important facts, principles, and terminology of science, for their ability to apply important facts and principles to new problems in science, and for their ability to draw reasonable interpretations from experimental data in science. The instructor found that in terms of knowledge the discussion and demonstration procedures

were slightly more effective than the traditional procedure. In terms of ability to apply principles and to interpret experimental data, the discussion and demonstration procedures were markedly more effective than the traditional procedures. Hence, he proceeded to develop discussion and demonstration procedures as the regular method of conducting his science courses.

In this illustration the Cooperative Study provided through the workshop discussions a stimulus for attack upon a local problem. The staff of the Study provided guidance in setting up the program and help in constructing the test materials needed. The central staff also helped in suggesting statistical methods useful in analyzing the results.

A fourth illustration is selected from projects involving the construction and use of comprehensive examinations. A number of the colleges were interested in constructing better course examinations. Others were giving or planning to give comprehensive examinations at the end of the sophomore year, and a few were giving or planning to give these comprehensive examinations at the end of the senior year. One college had been giving certain of the Cooperative Tests at the end of the sophomore year, but wanted a more comprehensive appraisal. In the early stages of the Cooperative Study several intercollege conferences were devoted to a discussion of evaluation including tests and comprehensive examinations. As a result of these discussions this college set up an examining committee that met two or three times with members of the central staff in laying out a plan for the construction and development of comprehensive examinations to be used at the end of the sophomore year. Following this plan, the local committee met with various staff groups in the college to agree upon the purposes which the comprehensive examination should serve and the educational objectives which students should be expected to attain and which should, therefore, be tested in the comprehensive examination. After these objectives had been formulated, the local committee again met with the central staff whose members were familiar with a wide variety of available published and unpublished tests and examinations. They were able to suggest a number of available tests that would meet part of the needs of this college for its comprehensive examination. They were also able

to identify certain objectives for which new tests would have to be built. Members of the central staff and the local committee agreed upon steps to be taken in constructing these additional tests. Members of the central staff constructed certain sample items for each objective to suggest possible types of examination exercises that would test for these objectives. The local faculty members then constructed other exercises of similar type based upon the content of the local college program. These exercises were then submitted to the central staff for criticism, possible revision, and suggestion. The examination involved three degrees of testing and included several published tests, some exercises drawn from the files of the Board of Examinations of the University of Chicago, and a number of exercises constructed jointly by the local faculty and the central staff.

After the comprehensive examination was given, the results were analyzed by the central staff and suggestions for further revisions of the tests were made. The results were also compared with other evidence relating to the students to get a further idea of the validity of the tests. This has resulted in a continuous program of development of comprehensive examinations in the local college. This illustration again indicates that the Cooperative Study was of assistance in improving the college program by raising questions regarding the adequacies of the present examination program, thus stimulating a study of the problem by providing suggestions for examination construction through the work of the central staff, by providing central staff members who actually constructed certain exercises and were able to analyze and interpret examination results. Thus, suggestion, technical help, and criticism all aided in the development of this project.

The fifth illustration is chosen from the field of student personnel services. In the early days of the Study, conferences of personnel officers from the cooperating colleges were devoted to consideration of the functions of student personnel services and their relation to instruction and administration. A representative from one of the colleges became impressed with the fact that a large number of persons on his campus were rendering certain personnel services, that they were often unaware of their personnel function and received little or no guidance in carrying on

personnel work. Hence, he proposed to develop a handbook for all staff members of this college that would outline general policies for personnel work, describe duties and activities to be performed, and suggest criteria to guide in the effective performance of these duties. This would serve as a type of training for the large number of people on the campus who performed certain personnel functions. The first step in this project was carried on at the local institution. He identified the major types of personnel responsibilities conducted on the campus and also listed the person or persons responsible for each one. He sent this list to the central staff asking for criticisms of the list and for suggestions on next steps in carrying on the project. Members of the central staff sent him a bibliography of materials dealing with a number of these personnel services and began a collection of handbooks and similar materials that might be suggestive to him. In collecting these handbooks, the central staff found that personnel officers in a number of the other cooperating colleges were interested in the project. A meeting was held of all these representatives at which time there was discussion of and agreement upon a division of labor in collecting and preparing material for each of the major sections of a personnel handbook. The meeting also resulted in the development of a master-list of topics that might be included in a local handbook. The central staff then asked each of the personnel officers in the several colleges to suggest problems and difficulties encountered in the efficient performance of each of the major personnel services. These problems or difficulties became topics around which material needed to be written for the handbook in order that persons performing these personnel functions would have guidance in avoiding the problems or overcoming the difficulties. The instructor who first became interested in the preparation of such a handbook was able to develop the first draft on the basis of a selection from the master-list of possible activities to be treated, a master-list of difficulties and problems, and a list of criteria to be considered in working out an efficient method of performing each duty. Of course, no one institution would want to use all of the items on the master-list, but a comprehensive list provided some safeguard against serious omission of items that were of importance in the local college. After a first draft of the

handbook had been prepared, it was criticized by the central staff and by some of the representatives of the other colleges.

The Cooperative Study aided in this project by providing guidance on the steps to be followed in conducting a project by bringing together people from other institutions to make suggestions and to criticize materials, by helping to set up criteria to guide in the writing of materials, and by assembling a collection of materials which could be consulted by representatives from the local institutions.

These illustrations are enough to indicate the general function of the Cooperative Study during the first year and a half of its existence. During this period it concentrated its efforts upon assisting individual colleges and individuals and groups within the college to work upon problems of importance to them which had to do with particular aspects of the program then under way to provide a general education for the students. However, during this period the Cooperative Study did make some contributions to a thorough-going re-examination and development of a program of general education on a college-wide basis. Perhaps if one were to list these contributions in the order of their significance, one should place first the effect of the Study in stimulating and changing the attitudes and understanding of staff members of the colleges. The opportunity for exchange of opinion, the participation in conferences directly devoted to problems of general education, the conduct of particular studies aimed at improving some part of a program of general education, and most of all participation in the summer workshop, all had some influence upon the college staff members themselves, their conception of general education, their ideas of procedures, and their skill in using appropriate instruments in their work.

Another contribution of this early phase of the Study was the actual collection of data which could provide a basis for the re-examination of the college program. Data collected in a study of objectives, information obtained from studies of teaching methods, and data obtained from tests and examinations in many cases proved useful in giving concrete information regarding the strengths and deficiencies of current programs of college education. Another value, though less important than the first two, was

the actual improvement made in particular courses, procedures, and devices. In a number of cases marked improvements in particular courses were made, and in other cases considerable improvement in instructional and counseling procedures took place. Although these were somewhat piecemeal, their net effect was noticeable both in terms of examination results and of the observations of visitors to the college campus.

Finally, during the first eighteen months of the Study the colleges had been learning how to work together so as to derive benefit from cooperation. They felt freer to examine a variety of proposals and to appraise them in terms of their values for each college rather than to accept or reject them on the basis of personal preference. Faculty members from the various institutions were becoming sufficiently well acquainted to permit free interchange of ideas and experiences. Each college felt it no longer necessary to defend itself because it was different from other colleges; and the use of intercollege conferences, summer workshops, and exchange of materials had broken the ground for more effective cooperative attack upon critical problems common to a majority of the colleges.

Major Projects in the Humanities

First Project: General Goals of Life¹

THE TEACHERS of humanities in the cooperating colleges recognized that an important college objective was to help the student develop a philosophy of life. This goal was considered so important and the concrete steps for working toward it so in doubt that it was early decided to make a cooperative attack upon aspects of this area of college work. After some discussion it was agreed to concentrate attention on the beliefs of college students that are necessary for an adequate design for living. There are, of course, countless aspects of belief which could and should be studied. Early intercollege committees suggested a number of these for consideration. What does the student consider the main goals of his life? For the sake of what values does he think that he lives? To what extent does his total pattern of values seem to meet certain criteria of a good design for living? Whence does he derive his pattern of values? For whom does he seek values? On the basis of what criteria does he believe he should make his ethical choices?

Although these questions and many others were all worthy of study, limitations in resources and the necessity of doing one thing at a time made some selection necessary. Since only a part of the total problem could be dealt with, it was felt that the work to be done should serve primarily as an illustration of possibilities in this field. It is from this point of view that the several major projects must be viewed. Much remains to be done even in the areas that were explored. These areas are not the only important ones; other areas that were not explored may be even more important. Each project, however, may serve as a map of the large territory involved and as an illustration of how further work in various sections of

¹ The several inventories developed by the Cooperative Study in General Education may be obtained from the Cooperative Test Service of the American Council on Education, 15 Amsterdam Ave., New York 23, N.Y.

that territory can be carried on. In this way, the projects will be useful to others.

Because the intercollege committee in the humanities chose as its first project to study what goals the student considers most important in his life, the educational objective involved might be stated: "The student should have a desirable pattern of dominant and subordinate goals." As has already been stated, however, the definition of an educational need is "the gap between the desired status of students and their present one." At this point either end of the problem could have been attacked. The project could have been begun by studying the desirable status for students, deciding upon desirable patterns of goals and then seeing how well students' existing patterns conformed to these models. Or the students' existing patterns of goals could first have been studied after which decisions could have been made about which patterns were desirable and which deviated from the ideal. Ultimately, of course, the findings from either attack would suggest modifications of plans in working with the other; but at this stage it was possible to make an initial choice.

The committee elected to find the present status of students, that is, to find what patterns of goals for life existed among students. This choice seemed the more profitable for several reasons which, because they may suggest general principles of procedure, merit enumeration here.

First, if the project had begun by discussing the ideal status of students, the group would have been forced to talk in generalities. Generalizations are unavoidable; in fact, they are necessary. But in a discussion of generalities much of the controversy frequently arises out of misunderstandings and confusions of the sort that had already been encountered in the early conferences about objectives and the needs of students. A discussion of generalizations and principles is freer from much of this confusion when it takes place with reference to specific material. The committee could hold much more rewarding discussions about the ideal pattern of goals which students should have if the remarks were based on the actual patterns of students whom they knew.

A second influence was the diversity of the colleges. On almost any principle of classification, the schools fell into very distinct

groups; but nowhere were these differences greater or more basic than in those areas necessarily involved in determining an adequate philosophy of life. To take but a single example, some of the colleges were church-related. They were naturally committed to the belief that any adequate philosophy of life must have a Christian or religious orientation. Other municipal institutions or state-supported schools would accept as adequate a much wider range of philosophies. Though there would be much common ground, differences among the schools would still be important. The colleges were to be autonomous. It was, above all, not the purpose of the Study to make all the colleges alike—to force the church colleges to accept a nonreligious point of view, or vice versa.

Under these circumstances, it seemed obvious that the Study could be most helpful if it undertook to find out the present status of goals of life held by students. Once this evidence was available, then the faculty of each college could consider it and could decide whether that institution judged the present pattern satisfactory or whether certain changes were desirable. The Study, as an organization, could suggest points which faculties should keep in mind while making decisions of this sort. It could also suggest, once the college had reached definite conclusions concerning what changes were desirable, some possible means of effecting these changes. But if the colleges were to be free to make their own decisions and to control their own programs, then they, and they alone, could make the specific decisions and plan the actual programs.

Since the only feasible plan seemed to be for the Study to make its work descriptive rather than normative, the next question was, "What sort of descriptive evidence can be gathered about the kinds of goals which students now have?" Considerable material was already available at many different educational levels in the various colleges, for many teachers and institutions in the Study had long made a practice of having students write essays setting forth their philosophies of life.

These essays naturally have all the limitations of any verbal statement. They are what the student thinks, or wishes to think, or wishes the reader to think is his philosophy of life. Teachers were, of course, not under the misapprehension that there is a

perfect correspondence between the way men live and the way men say they would like to live. Not only is it hard for anyone to see his own motives clearly; the hypocrite, the person with selfish or antisocial aims which he hesitates to express, and the victim of social or economic pressure, all undeniably exist. In so far as these factors operate, they obviously make of somewhat questionable value any statement obtained from the student by direct means. What he says is his philosophy of life may not actually be his philosophy of life.

On the other hand, teachers believed that it is equally incorrect to assert that there is absolutely no relation between the way in which people talk about life and the way in which they live. Material obtained in this way must, of course, be interpreted in the light of data secured from other sources. Nonetheless, the group felt that in many cases the verbal statement about the kind of life the student was seeking would be a helpful index—though admittedly not a perfect one—of the kind of life the student was living or was seeking to live. Students' opinions, even if erroneous, are of educational importance.

In the case of college students, moreover, when there is a discrepancy between stated beliefs and conduct, this inconsistency often arises from confusion or thoughtlessness. For such a student, an opportunity to state his own beliefs precisely and to examine the implications which these beliefs may have for action will often lead to closer harmony between his pattern of beliefs and his pattern of living. Thus, though the more indirect psychological techniques undoubtedly have greater validity in more extreme cases, the group believed that students who were honestly puzzled or ignorant about the problems involved in developing a view of life could profit greatly, even from direct questioning and instruction.

The Values of an Objective Instrument

Acknowledging the limitations of working with the philosophy of life directly and in verbal terms, the group still believed that much of value could be accomplished. While insight into this verbalized philosophy could be gained from the essays already obtained by the colleges, more precise knowledge was needed

which could be examined critically. The result of further conferences between the faculties and the staff was the decision that some objective means of securing and recording the student's pattern of goals was desirable. Although the response in the form of an essay gave certain information which probably could not be secured from any objective device, the existence of an objective instrument would not preclude the use of an essay.

On the other hand, the objective instrument would have several advantages, particularly as a supplementary device. In the first place, the philosophies thus recorded could be more exactly and more easily compared. For example, the score of an individual could be compared to his own scores at other points in his educational career, to the scores of other individuals, and to the scores of groups. Similarly, scores of sections, classes, or entire student bodies could be compared and judged. Likewise, the philosophy of a student who, left to himself, deals in airy generalities would have more points of comparison with that of a student who plunges into petty minutiae; and the statement of the verbally facile student could be more meaningfully compared with that of one less articulate.

The records of these philosophies would also be more concise and more usable. Faculty members who wished to learn about the philosophy of a group of students would no longer face the difficult and often impossible task of reading through hundreds of pages of student manuscripts and of then attempting to summarize and generalize. Rather, the results stated numerically would permit more rapid summarization and comparison. Then, finally, instead of existing like the essay in a single copy tucked away in some personnel folder or teacher's files, copies of the results of an objective record could be made available for study and consultation, easily and inexpensively, to every person concerned with the student. For these reasons, the preparation of some objective device of this sort seemed eminently desirable as a first step.

Hence, it was decided to explore whether some objective device which would secure these advantages could be evolved. Since such an attempt was the first in this field, a certain roughness would be inescapable, but the committee hoped that it could build an instrument with sufficient utility to justify the work.

USE OF THE TERM "INVENTORY"

The product of this attempt was the Inventory of General Goals of Life. The term "inventory" was chosen rather than test, check list, or some other more familiar term because it carried exactly those connotations which imply the results the committee wished to achieve. In the first place, the student was being appraised in terms of his beliefs. If the results were to be satisfactory, the student must cooperate. Then, too, the student—his purposes, his interests, and his experience—was an extremely important factor in the decision of what constituted a good life for him. Consequently, his cooperation was necessary not simply to secure greater validity in the results, but also to guarantee that the results would be used, that is, he would have to see what his beliefs were and do something about them. No satisfactory way of life could be forced upon him. It was, therefore, desired that the student should "take an inventory" and that he should recognize his part in the process.

Building the Inventory of General Goals of Life

THE SELECTION OF GOALS

The first step in building some device by which the student could indicate what goals he felt were dominant in his life and what goals were less important or undesirable was to secure a list of possible goals. In this search the committee drew heavily upon papers already written by students and upon the experience of all teachers in the group. In the selection of the goals finally included in the inventory, two criteria were prominent. The first was that the goals listed, though couched in student phraseology, should give an adequate representation of certain of the great historical traditions of philosophy and religion. The second was that the list should include goals which, though less common in formal philosophy and religion, are familiar in our culture as "cracker-barrel philosophy." Within the limitations imposed by practical conditions, each student should be able to find expressions which he could consider adequate statements of elements of his own point of view.

The number of possible "philosophic" positions (to use the term

in its widest possible sense) and the number of statements that can be framed to express any single one are, of course, enormous. Yet the practical situation demanded that the final list be brief. Brevity was achieved in three ways. (1) Certain goals, between which distinctions are customarily made in philosophy but which appear to be closely related to one another in the minds of most students, were permitted to stand together in a single statement.² (2) Goals, familiar in the history of thought, but not commonly held by American college students, were omitted.³ (3) Goals common in student philosophies but in a subordinate position were also omitted since the aim of the inventory was to determine the more dominant goals.⁴

THE DEVICE OF "PAIRED COMPARISONS"

Closely connected with the selection of the goals was the question of the technique to be used. Since the purpose was to get the student to rank the goals in order of their importance and acceptability to him, the device of "paired comparison" appeared appropriate since this technique facilitates accurate and easy ranking of various possibilities. Thus, in the revised form of the inventory each of the twenty goals is paired once with all the other nineteen, and the student is asked to choose one goal of each pair. As a result of this process, the goal for which the student has the greatest preference will be selected nineteen times (that is, every time it appears), or will have a score of 19. The student's second choice will be selected eighteen times (a score of 18), being rejected only in the pair where it appears with the most acceptable goal. The other goals follow with diminishing scores until the goal which the student finds least acceptable or rejects most emphatically is reached. In short, the student who manages to make his choices with perfect consistency will give to goals scores which will rank them in order.

In the selection of goals in life a number of criteria of value may operate as the student goes through the list. This may result in

² An example of this sort of statement of goal is "Peace of mind, contentment, stillness of spirit."

³ The attainment of Nirvana or union with the world-soul is a case in point.

⁴ An example is "good health." Though many students list it as a goal, few if any students seek health as an end in itself. Rather they consider it a necessary condition for attaining other goals which they consider more important.

selecting some goals because of one criterion and other goals because of another criterion. Furthermore, any verbal statement of a goal in life necessarily involves some ambiguity and some variety in interpretation. Finally, many college students are confused or uncertain about their philosophies of life so that clear and consistent choices are hardly to be expected. For these reasons many ties appear in the scores. The mere presence of these ties, however, as will be seen in the interpretation of individual scores, is in itself a subject for interpretation.

The Method of Interpretation

In interpreting the inventory, one pays attention chiefly to those goals which are ranked at the head and foot of the list. The exact number of goals considered depends partly on the nature of the particular goals involved and partly on arrangement of the gaps and ties in ranking. Those goals at the head of the list are the statements which appeal most to the student. Next in importance are those at the foot of the list since the student's philosophy is indicated both by those goals which he accepts and those which he rejects.

Usually little weight is given to those goals which appear in the middle of the list. The reasons for this procedure are both philosophical and statistical. Statistically, extreme deviations are much less likely to occur because of pure chance. Philosophically, the basic concepts of many positions can be stated by accepting relatively few of the statements in this list and by rejecting a few others. For a particular philosophic position, many goals listed may be irrelevant or meaningless. The form of the test does not, however, permit the student to discard these goals literally. He must continue to make choices involving them. As a result, he tends to mark those goals to which he is indifferent somewhat lower than those goals which he accepts as statements of his position, yet somewhat higher than those goals which his position necessarily rejects. In short, the goals toward which he is neutral or indifferent tend to appear in the middle of his ranking.

As originally prepared, the inventory contained twenty-five different goals and was taken during the year 1941-42 by approxi-

mately one thousand students. On the basis of this experience some revision of the inventory was undertaken during the summer of 1942.⁵ Improved by these modifications, the revised form of the inventory was considerably more useful and has been administered to about twenty-five hundred students in sixteen of the colleges in the Study and several other institutions.

Anne's Pattern of Goals

Probably the first questions which arise are: "What kind of scores or patterns of scores do students produce on this inventory?" "How can these scores be interpreted or translated into a philosophy of life?" Both these questions can best be answered by illustration. As an example, consider the scores of a girl in one of the colleges, Anne, who ranked the goals as follows:

<i>Score</i>	<i>Goal</i>
19	Serving God, doing God's will.
18	Self-sacrifice for the sake of a better world.
17	Promoting the most deep and lasting pleasures for the greatest number of people.
15	Serving the community of which I am a part.
13	Handling the specific problems of life as they arise.
12	Self-development—becoming a real, genuine person.
12	Finding my place in life and accepting it.
11	Peace of mind, contentment, stillness of spirit.
11	Realizing that I cannot change the bad features of the world, doing the best I can for myself and those dear to me.
11	Overcoming my irrational emotions and sensuous desires.
9	Doing my duty.
9	Fine relations with other persons.
8	Getting as many deep and lasting pleasures out of life as I can.

⁵ This first form was slightly too long for use within the normal class period. As a result, the number of goals was decreased from 25 to 20. Because of the paired form of the device, this decrease in number of goals reduced the number of items from 300 to 190 and hence shortened and simplified the instrument considerably. Considerations other than brevity also urged the elimination of certain goals. Several seemed so closely related in the minds of students that they saw almost no difference between them. Some goals were accepted or rejected with such unanimity that they failed to discriminate between various student philosophies. Other goals like "Love" were ambiguous in the sense that the philosophic or theological tradition assigned one meaning to them, yet students normally attached a rather different one. Since a few new goals (suggested by teachers and students) were added and some statements reworded, the revision was fairly extensive.

- 8 Being able to "take it"; brave and uncomplaining acceptance of what circumstances bring.
- 6 Achieving personal immortality in heaven.
- 3 Making a place for myself in the world; getting ahead.
- 3 Survival, continued existence.
- 3 Security—protecting my way of life against adverse changes.
- 1 Living for the pleasure of the moment.
- 0 Power; control over people and things.

Looking at this pattern, we can make certain comments about it as a whole. First, Anne has given a fairly definite response to the inventory. Had she been confused or careless, her scores would have clustered about the middle of the scale (between 8 and 11). As it is, they cover the entire possible range from 0 to 19. She has been willing to accept some goals quite readily and much less willing to accept certain others. Her ties (except for the 3's) fall toward the middle of her list, the place in the ranking where those goals usually appear about which the student is confused or toward which he is indifferent.

Anne's pattern is also coherent. The goals which she ranked high are generally religious and altruistic. The goal which she ranked first, choosing it each time it appeared, is "Serving God, doing God's will." Apparently this service of God consists, at least in part, of service to her fellow men also, for immediately after the service of God she ranked: self-sacrifice, the promotion of the pleasures of others, and service to the community. The goals she ranked low are also consistent with this pattern. They have to do primarily with her own personal interest: her power, momentary pleasure, personal security, survival, and advancement.

A number of other elements in her pattern point in the same direction. She ranked in the low middle of the list the goal of self-development, which is extremely popular with most students who have taken the inventory. The procurement of deep and lasting pleasures for herself suffered a similar fate, appearing in the lower half of her list. The note of renunciation also appears in her willingness to find and accept her place in life (score of 12) as opposed to making a place for herself in the world (score of 3). In short, considering Anne's pattern by itself, there is a coherent and consistent emphasis on the service of God and man and a lack of

interest in those goals (or even a renunciation of them) which have to do with her personal advantage.

Anne's pattern can be considered, however, not merely as a philosophy in itself; it can be compared with the scores of two thousand other college students who have taken the inventory. Though the divergence of an individual's scores from the trend of this group is, of course, not a good or bad thing in itself, these comparisons can often emphasize interesting characteristics of an individual's philosophy. Naturally the highest and lowest scores of any individual tend to deviate from the medians of the large group since its scores average out and hence fall in the middle of the scale. On the other hand, even for this larger group certain goals are more popular than others. Extreme deviations from this general trend may, therefore, be noteworthy. Figure 2 shows Anne's scores on the inventory plotted against the medians and quartiles^a of 2,248 students for whom data are available. Her deviations from the group emphasize exactly those points which we have already mentioned, but stress particularly the high score which she gives to self-sacrifice and the low scores she assigns to security and to getting ahead in the world.

Considered from both points of view, then, Anne's scores present a definite and coherent pattern for which an interpretation appears possible. This picture is the first outcome of the inventory.

The Validity of the Scores

The most important question to be raised in regard to the inventory was, "Are the results a valid equivalent of a *verbal* statement obtained from the students?" The consensus appears to be that the answer is "Yes." This conclusion is based on evidence of several different sorts. The results of the inventory have been widely used in individual counseling in many colleges, either as part of the personnel program or in connection with various courses. In these cases, the adviser or instructor usually had one or more personal

^a For those who dislike statistics, it may be noted that these terms are merely convenient ways of describing the data. The median is that point above which 50 percent of the cases fall and below which the remaining half falls. The quartiles (together with the median) break the distribution into quarters. Thus, a score at or above the third quartile shows that a student is among that quarter of the students which ranks the goal highest.

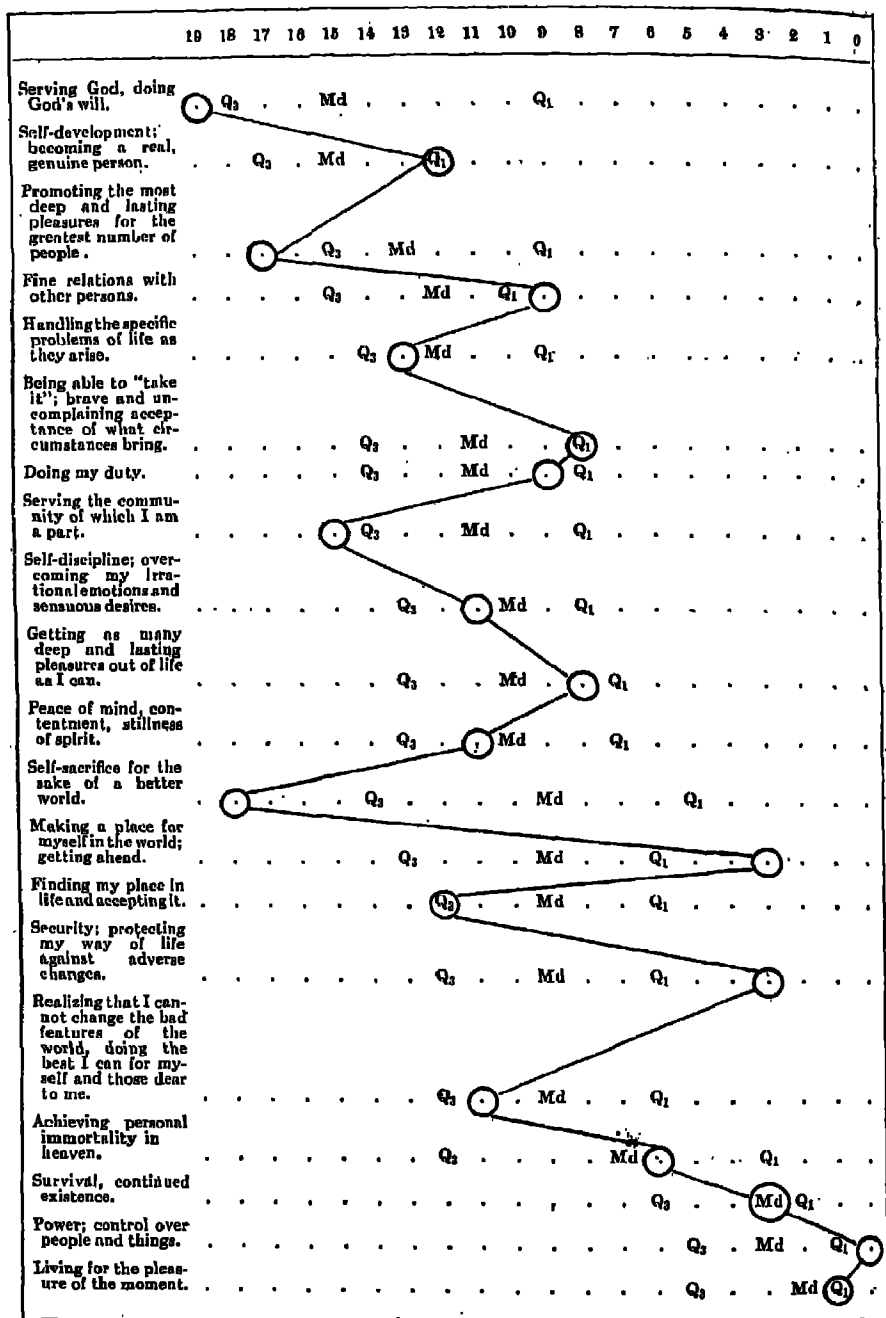


FIG. 2.—Anne's scores on the Inventory of Students' General Goals in Life compared with the medians and quartiles for 2,248 students.

interviews with a student in which the results of the inventory were considered and the student was asked whether the results expressed his point of view. When members of the staff in the humanities visited colleges, they frequently spent several days interviewing students who had taken the inventory, and the responses of several hundred students were checked in this way. For between four and five hundred students, essays setting forth the students' views were available for direct comparison. So-called "blind" interpretations, made by the staff who had no knowledge of the student, were checked by teachers in various schools. Validity could also partially be judged through comparison of the results of this inventory with those obtained from other instruments. Although any judgments based on this sort of material must necessarily involve some subjectivity, the evidence from all these sources is in harmony with the expectations for a valid instrument. It seems to indicate clearly that the scores of the inventory are a valid equivalent of other verbal statements. Greater clarity and specificity can, of course, be obtained when additional material about the student is available, and most instructors have used personal interviews and other devices in conjunction with the inventory. But, even in itself, the instrument is meaningful and has the virtues cited earlier.

Uses of the Inventory

The discussion thus far has treated the inventory largely as a fact-finding device, an instrument which will tell us what the life-goals of students are. This information is sterile and the time spent in obtaining it is wasted unless students profit by it in some way. The inventory has many possible uses, and different colleges have taken advantage of various ones. Any use of it to determine educational needs involves a series of value-judgments. In the Cooperative Study the right to make these judgments of desirable status and to plan programs to produce it was reserved to the individual colleges and their faculties. On both these points they must speak for themselves. Since limitations of space, however, make it impossible to illustrate all the uses, they are listed briefly in the following paragraphs.

The inventory has some educational usefulness as a teaching

device even if no further efforts are made beyond administering it. At the lowest level, the mere fact that the student is asked to take the inventory focuses his attention on the problem of life-goals and a general philosophy for living. The process of working through the inventory may in itself lead him to clarify his thinking on some points and, occasionally, will interest him in further thought, discussion, and reading on certain topics. Naturally, if the student receives no further help or if these matters are given no further emphasis, his interest may be very cursory and short-lived, but even under these circumstances the inventory seems to have some effect, slight though it may be.

The inventory is undoubtedly more useful if it serves as the basis for some further work with the student, either as an individual or in a group or class. Many colleges have used the inventory chiefly in personal interviews with the student. Some have found, for example, that the inventory serves admirably as a starting-point (and even as an "excuse") for the first counseling interview. This device is particularly useful in those schools which consider aiding the student to develop an adequate philosophy of life primarily the duty of the counseling program. Most students after they have taken the inventory wish an interpretation of their scores and have some questions to ask. This discussion starts the interview off with a definite topic and purpose. In the course of this talk the adviser can get considerable information in addition to that furnished by the inventory about the kind of person the student is.

The inventory has also proved valuable as a starting-point for classes in various areas. The most obvious use of this sort is in classes in philosophy or religion. If these courses emphasize the development of a philosophy of life, then the instrument immediately raises problems connected with this task. Similarly, if the course covers the history of philosophy or religion, the inventory immediately brings to the student's attention many of the great problems with which philosophy and religion have been concerned. Thus, instead of seeing the histories of these subjects as a somewhat bewildering succession of men, events, and views, he sees them as a continuing attempt to answer certain basic problems which concern him and all men.

Classes in literature have also used the inventory. The analysis of character and action usually involves ultimately the scheme of values which the characters hold. Students, by seeing part of their own system of values clearly through the inventory, are more keenly aware of the values held by characters; and, needless to say, by studying the value-system of fictional characters they become more critical of their own.

Other classes, too, in such diverse areas as freshman orientation, psychology, and social science have used the inventory in very different ways, but all users have usually had, at least indirectly, the same general purpose. They wished to focus students' attention on the problem of values.

The uses for which the inventory was originally constructed were to provide information about the goals that students held in order that wiser judgments might be made regarding objectives in this area and to provide an instrument which could be used to assess the change in students' goals which might develop from college instruction in this field. To use the results of the inventory in arriving at judgments about objectives, it is necessary to consider both the patterns of individual goals and the group summary for the students in one's classes. The group summaries indicate the typical status of the students' philosophy of life and reveal gaps between acceptable hierarchies of goals and those common to the class. They thus suggest class needs, that is, the kinds of changes in goals of life that are necessary to develop students who will have desirable patterns of goals.

An examination of the individual patterns of goals not only reveals individual cases that may deviate markedly from the group but also identifies inconsistency and confusion on the part of individual students. These kinds of information at once give concrete data useful in making judgments about the needs of one's own students in relation to the development of more desirable goals of life.

The use of the inventory at the time students enter college or at the time they begin work in philosophy and the use of the inventory again toward the end of their college career or toward the end of courses that are aimed at helping students derive more satisfactory goals in life provide evidence regarding the extent

to which the college experience has been successful in bringing about desired changes in student life-goals. Differences between the results of the first use of the inventory and the second can be studied for the group as a whole and also for each individual student. The data from the group as a whole provide an evaluation of the college experience in shifting typical patterns of goals and the degree to which important goals have become increasingly desired by the student group. The comparison between the first and second use of the inventory for individual students provides an appraisal of the effectiveness of the college experience in the case of individuals in developing a more satisfactory pattern of life-goals and particularly in providing evidence about changes in consistency in the hierarchy of goals and the reduction of confusion. Hence, the inventory can be used as an instrument of appraisal as well as a device helpful in deciding on objectives and in teaching and counseling.

Second Project: The Inventory and the Check List in Fiction

Teachers of literature took the lead in developing the second major project in humanities. It was based upon the fundamental assumptions of the intercollege committee in the humanities that anyone using literature, music, or the fine arts to contribute to a "good life" would (1) explore values in these arts; (2) make a design for using the arts in his life; (3) harmonize his actual use of the arts and his design; and (4) work for a world in which others go through the same process. These two inventories are directed at the beliefs of students relating to fiction and provide a tool primarily for the first two steps in the use of the arts—exploring values in the arts and making a design in the arts. Furthermore, they are limited to prose fiction rather than to literature as a whole.

The Inventory of Satisfaction

The Inventory of Satisfaction Found in Reading Fiction was constructed in the belief that people read fiction for the same reason for which they do anything else—because of the satisfac-

tions or values they obtain from it. The amount of reading they do, the kind of material they read, the purposes with which they read are all intimately related to the nature of the satisfactions they can obtain.

This fact gains added importance in general education since many teachers would insist that the essential quality of general education is its attempts to provide the student with those techniques and incentives which he will need if he is to continue to educate himself after his formal education is completed. To put the discussion in terms of literature again, few students, if any, will be able to read all "good" literature during their years in college or university. Even the specialist has gaps in his literary experience, and we cannot assume that all "good" literature was produced before his graduation. If that small percent of our population which is graduated from college is to be "literate" (in the sense that writers in the public print who bemoan the "illiteracy" of our graduates use the term), they must continue to read after leaving college.

Unfortunately, considerable evidence about college graduates indicates that they do not do so. Studies of alumni made by many colleges show with fair clarity that their graduates are not reading at the level or in the quantity which the faculty feels they should. Some would insist that this situation is perfectly normal. They would contend that any disappointment or feeling of failure which faculties may have when they view these results arise from an unrealistic view. College professors, they insist, have leisure to read (however overworked they may feel), but the college graduate in the bustling world outside college cloisters has little leisure in which to read and should not be expected to read much.

While there is some truth in this argument, it is not a complete answer. Graduates engage in many activities for purposes of recreation, self-development, and the like—purposes for which reading could serve, in part at least, equally well or even better. Many alumni, for example, prefer to join a book review club rather than to spend the same amount of time in reading.

Records of the purchase or borrowing of books show the same trend. In time of depression or war nonfiction will usually fare better than fiction, but even under these stimuli neither the quan-

tity nor quality of the reading which results seems wholly satisfactory to many teachers.

THE IMPORTANCE OF SATISFACTION IN READING

The problem can be approached from many different sides. That chosen by the committee, the study of satisfactions obtained from reading, is merely one of several possibilities. It has, however, the following points to recommend it. If students do not read after leaving college, this neglect may well be due to their failure to obtain satisfaction from reading. And this lack of satisfaction would help explain the slight amount of reading and the inferiority of the material read.

The failure to obtain satisfactions from reading often grows out of the lack of certain skills which would make reading a satisfying experience. For example, a student who has difficulty in reading—that is, finds reading a slow and laborious process—would derive no pleasure and relatively little profit from it. Similarly, the student who is unable to comprehend matters which are only implied will gain little satisfaction from a book which is rich in overtones or even demands a comprehension of them for its sense. Without these skills the student cannot achieve the satisfactions which depend upon them. As a result the question of whether or not a student actually gets certain satisfactions frequently resolves itself into the question of whether he possesses the necessary skills. On the measurement of many of these skills, colleges have been working hard and with success.

But fundamental as these skills are if the student is to obtain the satisfactions they alone make possible, his beliefs about his own state have more claim to attention than the dubious one of being interesting information. Does or does not the student feel he gains a particular satisfaction? His answer to this question may have very important implications. Suppose that, to the best of our knowledge, the student has all the abilities requisite for reading a certain book; yet he feels he gains nothing from it and insists he finds it dull, difficult, or incomprehensible. If so, he will abandon the book, avoid books like it, and probably cut himself off from a considerable section of valuable literature. On the other hand, human nature being what it is, the student is much more likely

to overestimate his capacities. He will believe he is gaining satisfactions which he is in fact not securing. In this case he will read rather thin books and assume he is getting a lot from them. Or he will read on a very inadequate level, though believing he is getting from the material all it has to offer. He will, therefore, strenuously resist all efforts to teach him, on the grounds that this is "old stuff" to him. Still another possibility is that the student may have completely overlooked certain types of satisfaction; he has not thought about them and is not aware they exist. Such ignorance may seem incredibly naïve, but work in connection with the inventory has shown that it exists. Within certain limits, most teachers would like to extend the range of satisfactions which the student can obtain. If there are "holes" in the student's present pattern, a knowledge of the existing structure will show us how to "build in" new experiences. If we relate these new values to those which the student already possesses, the new satisfactions are much more likely to be assimilated.

In short, as an index of the student's past experience with reading and his reaction to it, as a predictor of the sort and quantity of material he is likely to read, as an aid in detecting blind spots and weaknesses in his abilities, and as a basis for further work with him, his beliefs about the satisfactions which he gains promised to be useful data. To elicit this information, the Inventory of Satisfactions was constructed. It was not intended as a test of the student but as an inventory which would produce information useful to both student and teacher as a basis for further work.

The Plan of the Inventory

SATISFACTIONS OBTAINED FROM THE READING OF FICTION

The final form of the inventory contains two parts, one relating to satisfactions, the other to opinions about types of fiction. Part I contains a series of 150 statements expressing various satisfactions which may be obtained from the reading of fiction. This list was obtained from oral and written comments and from the standard literature of criticism and aesthetics. In response to each statement the student is asked to indicate whether he has commonly found this satisfaction in his reading of fiction, whether he has generally

not found it, or whether he is uncertain—either of the nature of his own experience or of the meaning of the statement.

The inventory thus embodies several of the difficulties of any inventory of beliefs. The method of approach is direct; the student is asked explicitly whether or not he finds a particular satisfaction. As a result, if the student feels himself under any form of pressure, it is perfectly possible and, in fact likely, that he will respond as he thinks he should respond rather than as he feels. On the other hand, when the student feels himself under no particular pressure and when the usefulness of an honest marking of the inventory is explained to him, his response is usually valid. College students have beliefs in many areas, and, unless subjected to pressure of one sort or another, are usually willing to express their opinions and to defend them.

Second, though the student's reaction may be honest, the possibility exists that he is asked for introspection beyond his power. He may not know whether or not he actually does attain a particular satisfaction, or he may quite honestly state that in his opinion he attains one sort of satisfaction when in reality the type of satisfaction is of quite different nature. At this point it is helpful to make comparisons between the two parts of the Inventory of Satisfaction and between it and the Check List of Novels, to be explained later.

Despite these difficulties the direct form of approach does seem to produce useful results and is at least free from any distortion caused by the interpretation of indirect evidence and is more meaningful to teachers who are not specialists in measurement.

Satisfactions may be obtained in such varying degrees as to constitute almost differences in kind, and this difference in degree is closely related to the type of material read. For example, a student who says that one of his satisfactions is to observe the analysis of human behavior and yet says that he has gained this satisfaction by reading light romances may be gaining this satisfaction, but attaining it on a rather different level from the student who has read with fairly complete understanding some novel which gives a more penetrating and thoughtful analysis of character. Because of the importance of this material, in the preliminary form of the inventory the student was asked to give a brief list of titles of

fiction he had read and enjoyed in the hope that this list would offer some index of the level of material from which he had secured this satisfaction. Out of this work grew the Check List of Novels. From a knowledge of the type of material read, conclusions—though necessarily tentative—can be drawn concerning the level at which particular satisfactions have been obtained. On the other hand, one must remember that students may read the identical novel at a number of different levels of perception. Thus, all of us have had the experience of rereading novels and finding many new things of which we had not been aware in previous readings. For these reasons, in interpreting the student's pattern of satisfactions, we must keep in view the type of material from which he believes he obtained them.

Scores for Part I of the Inventory of Satisfactions are divided into the following categories:

	Items
Relaxation and pastime	15
Escape	15
Associational values	15
Information, total	55
Intimate personal relations	15
Socio-civic	15
Philosophy of life and religion	15
Additional items in the area of information for which no sub-score is reported	10
Technical-critical	25
Self-development	25
Total	150

This classification is, of course, only one of the many possible schemes of arrangement, but one which proved useful.

In Part II of the inventory the student is asked to indicate his agreement or disagreement with forty expressions of general dislike or prejudice. Some statements bluntly express a dislike for all fiction. Most of the items state rather sweeping dislikes for various aspects of fiction. This part of the inventory has two purposes. First, while the first part of the inventory states all *positive* reactions, this part contains all negative reactions. Thus comparison

of the student's responses to the two sections will often reveal degree of consistency or of confusion or insincerity. In the second place, not only must the teacher work with the satisfactions the student obtains, but also he must try to remove the blocks which will prevent the student from understanding and enjoying much good fiction. Since large areas of fiction are closed to students who sincerely have these dislikes, many teachers feel that the removal of some of these prejudices is one of the first tasks which they must perform. No categorization of these dislikes has been made, since the total scores and the item analysis are sufficiently indicative.

FORM OF THE CHECK LIST OF NOVELS

The Check List of Novels, as has been indicated, grew out of work with the Inventory of Satisfactions. Since the inventory asks the student to react in general terms on the basis of his past experience with fiction, it seemed desirable—in fact, indispensable—to have some evidence of what this background was. The check list was devised to fill this gap in part.

In addition to use with the Inventory of Satisfactions, the check list by itself can serve as an index of the students' experience with fiction. In courses dealing with literature, this information can help in planning assigned readings, in finding common denominators for class discussion, and in guiding students' individual programs of reading.

Since a complete list of the thousands of fictional works written in English or translated into it obviously could not be offered, a relatively small sample, 300 titles, had to be selected. As is the case with all such selections, every one will feel that he can make a better one; and certainly in choosing any sample as small as this one, there are insurmountable problems of inclusion and omission. The only claim which can be made for this list is that it seems useful and that any other lists would suffer similar difficulties.⁷

No less difficult than the problem of selection was that of classification. Since the list was intended to include novels of all sorts,

⁷ Though both inventories concern the field of fiction, the check list is, as its title indicates, limited to novels. Experimental studies showed that few students seem to remember the author or title of short stories they read. Or perhaps the students felt that short stories were less impressive than novels. Whatever the cause, so few short stories were cited in preliminary returns that short stories were omitted from the check list.

a total score of all the works on the list which the student had read would in itself be only slightly meaningful; therefore, some classification of the novels seemed necessary. Classifications are even more debatable, if possible, than the original selection. The organization used here is only one of many possible ones, but the "error" in scores caused by possible disagreement with the classification will be relatively slight in comparison with the total number of titles in each category. The titles of the check list were classified as Difficult Novels, Standard Novels, Best-Selling Novels, Past and Present, and Light Novels.

The list of difficult novels contains twenty-one titles by fifteen different authors. These novels are difficult for various reasons. Some are hard by reason of their length, scope, style, or number of characters. Others make hard reading because of their philosophical or psychological emphasis. Others are difficult because of the technical devices they employ: stream-of-consciousness, counterpointed characters and themes, and the like. The difficulty of a few lies in the fact that they present problems or points of view which are somewhat incomprehensible to the student because of his immaturity and limited background.

Few freshmen have read many of these novels, and relatively few college students at any level other than those particularly interested in literature. For this reason these works were not classed in the Standard category. Yet, because any student who has honestly tried to read them has certainly had a broader experience with kinds of fiction than his fellows and probably has a greater interest in it, these works were placed in this separate category as an index of this experience and interest.

The list of Standard Novels contains ninety-three titles by sixty-seven different authors. This category attempts to sample, first of all, the long list of novels traditionally considered classics of American, English, and foreign literature. Second, here appear a sample of more modern works which nonetheless have outlived a vogue as mere best-sellers and have been accepted by critics and teachers of literature as modern classics. These titles were drawn from reading lists for college courses and similar sources. Though everything could not be included, an attempt was made to select the works most commonly used in high schools and colleges.

The list of Best-Selling Novels, Past and Present, contains ninety-

three titles by forty-nine different authors. The novels contained in this category have all had great popular vogue and were drawn from the lists of best-sellers, best-renters, and the selections of the book clubs. Many of them were published after 1941, but older best-sellers are also included. In some cases the titles included here are those of works which were not best-sellers in their own right but which were widely read as works of the author of another best-seller. In a few cases older works classified here as Best-Sellers may seem to some readers to have claims to be considered Standard equal to those of some works so classified. This difference of opinion is unavoidable.

Though probably the college teacher is primarily concerned with students' reading in those works classified as Standard, this equally large sample of best-sellers was included because much of the students' reading of fiction falls in this area.

In this category no attempt is made to classify novels on the basis of literary excellence. A few of these best-sellers may eventually become modern classics. On the other hand, many of them will finally be classified along with those now marked Light, and many of them are probably doomed to oblivion. Hence qualitative judgments of students' reading in this category must be made in terms of the particular books involved.

The list of Light Novels contains ninety-three titles by forty authors. The novels in this group make little or no claim to be masterpieces of fiction. They are written chiefly for the sake of providing entertainment and amusement, and they are read for those same purposes. Here fall mystery stories, westerns, adventure stories, humor, and light romances.

The student was asked to respond to the check list by marking the answer sheet as follows:

Answer space 1 - if you have *read* this novel.

" " 2 - if a movie was made from this novel and you *saw* the *movie*.

" " 3 - if you liked the *novel*.

" " 4 - if you did not read the book or see a movie made from it.

" " 5 - When you have finished the entire check list go back and blacken this answer space for those 5 *novels* of the entire list which you liked best of all. (Do not mark more than 5; mark fewer if you prefer.)

From this response several different sorts of information are to be had. One finds what the student has read. It also indicates what he has liked; the possible relation of this response to his scores in the Inventory of Satisfaction is obvious. "Liking" can, however, be felt at many different degrees of intensity. Consequently, the request to the student to mark his five (or fewer) favorites on the list was an attempt to measure this factor of intensity and to secure a more precise picture of the student's taste.

The marking in answer space 2 (saw the movie based on the novel) was provided because earlier experience with the check list indicated that students who have seen a movie based on a novel felt they were entitled to say that they had read the novel. By making an explicit difference in response between seeing the movie and reading the novel, the check list tried to avoid this confusion.

Possible Implications of Inventory Results

When these inventories were used with several hundred students, profiles were obtained for each individual as well as summaries for the entire group. The pattern of student reading thus obtained is both clear-cut and provocative of interpretation. The most obvious feature of the results was the popularity of the works classed as Best-Sellers. These books formed a very large part of these students' reading, particularly of the books they liked and of their voluntary reading. Some of the Standard works were probably more or less forced upon the students: suggestions of parents and librarians or assignments made by teachers probably led them to read books like *Silas Marner*. Among the more popular titles which were not likely to have been read as "work," the Best-Sellers appear more frequently than other types of novels.

Before attempting to judge the desirability of this result, an examination can be made of a number of the forces which probably produced it. One factor which should be mentioned is not explicit in the data, but can legitimately be adduced, that is, accessibility. Students tend to read what they find at hand. Most of the students in this group—and most students in our colleges—probably do not come from homes which possess libraries, even in the most modest sense, containing the novels classified as Difficult or Standard.

This statement may seem very sweeping, but it appears capable of substantiation. Some evidence on this point, from an admittedly small sample, was obtained in interviews used in validating the inventory. The size of the modern apartment, the frequency of moving, the rise of the movie and radio as sources of entertainment, and the failure of secondary and college education to make the present generation of parents interested in literature, all combine to make the homes from which these students come rather bookless.

In the formation of the check list, special effort was made to include titles appearing in reprint editions like Pocket Books, the Modern Library, and Everyman's. These editions—widely sold, compact, and inexpensive—seemed most likely to overcome the difficulties mentioned.

In most cases if fiction in book form enters the home, it is the best-seller. It is available for a dime at a nearby rental library. Or it comes as the selection of a book club, as a gift, as mother's text for her club meeting, and even as a rare purchase motivated by "the desire to keep up" or on the recommendation of a friend. Or it appears serialized in one of the popular magazines or can be painlessly perused in a condensation. One can scarcely over-emphasize the role accessibility seems likely to play in determining students' reading.

An obvious implication for education is that the colleges whose departments of literature are interested in developing a different taste in literature among their students must do what they can to overcome this difficulty. Since the presence of a book in the stacks of the college library does not seem to make it accessible to the necessary degree, several colleges have already sought to make available in dormitory libraries and in students' rooms those books in which the faculty believe students should be interested. In some colleges literature classes are taught in conference rooms adjacent to the library stacks; in a few others library books are housed in literature classrooms or conference rooms. But most of these efforts are somewhat limited in scope and effectiveness though they are fine as far as they go, and more can be done with them. The recent efforts of several universities to make small and inexpensive editions available to alumni in military service or to the general

public are somewhat different attempts. All of these methods, and more too, will probably be needed by anyone who wishes to change the type of material commonly read, for it appears to be determined by accessibility.

The sort of motivation which led students to the best-sellers is very clear in the inventories. In part it is the appeal of the social or snob value of this reading. One need read neither Thorstein Veblen nor Matthew Arnold (nor Quintilian, for that matter) to realize that this search for social acceptance and status has always motivated reading and dictated the type of material read. The important point is, however, that in our society the kind of reading fostered is the best-seller. To be sure, the advocates of the "great books" have succeeded in certain circles in making this type of reading honorific. Others interested in changing the type of material commonly read must make the same effort, for this sort of motive will account for much adult reading. Many will want to appear well read. The question is, "Well read in what?" At present, the answer tends to be, "That new book everyone is talking about." For those who accept the present emphasis on best-sellers, this motivation can be a powerful aid. Those who wish to change the type of material face the problem of redirecting this pressure.

The other satisfactions espoused by the students in the inventory are also congruent with the type of satisfaction offered by the best-sellers. Without undertaking a critical review of these novels, one can at least say that most of them are "good stories," with considerable action and "interesting" characters. (Though the terms within quotation marks are the vague vocabulary used by the man-in-the-street in his criticism, their connotations are sufficiently clear for our present purpose.) These books are easy reading and do not dwell much on the unpleasant things of life. Small wonder then that these students, with their expressed interest in relaxation and escape, turn to them and find them so satisfactory. Many will insist that these values can be obtained from "better" literature. The significant fact is that these students are apparently unable to find them there.

But, as the inventory made clear, students also believe they get ideas and information from fiction. In fact, items of this sort were extremely popular. If students do obtain ideas from fiction, the

fiction from which they obtain these ideas appears to be chiefly these best-sellers—or possibly their smaller brothers of magazine fiction. It can be asked, therefore, how well the best-sellers meet this demand. In some areas and on certain levels, there can be no doubt that materials of this sort are offered. In regard to other areas at the more profound level many teachers in the Study express grave doubts. Many of these novels, they charge, cater to a weakness of all human beings, particularly college students—the desire to feel, without having to go to too much trouble, that they have thought deeply about something important. Though the best-sellers touch important problems, their treatment of them is likely to be superficial, sentimental, or generally unsound. If, say these teachers, students draw ideas from these books, the ideas are probably not good; the novels which would furnish real material of this sort are the hard novels, and often, the unpleasant ones. These are the novels which few students of this group have read—and even fewer liked.

Whether we should join Plato, Marx, or Tolstoi and insist that fiction should be of moral and social significance is not the issue here. Nor need it be debated whether supplying ideas and information of this kind should be an aim in teaching literature. Whether encouraged or not, students do read for this purpose, and the ideas they obtain from these books may well be of concern to college faculties.

As has already been pointed out, the analytical and critical satisfactions are not very popular with students. Those which students attain are the more general and innocuous. On this level these satisfactions are offered by the best-sellers; but many of the technical excellencies of these novels often considered “the best” are foreign to these students. We can hardly expect, therefore, for these students to read these masterpieces if they remain blind to many of the values which they have to offer. In short, there is an extremely close relation between the reading (primarily the best-sellers) and the kind of satisfaction which students are able to attain.

The uses of the Inventory of Satisfactions and the Check List of Novels have been implied in the preceding discussion. When used at the beginning of a course in literature they provide an

indication of the students' past experience in reading and of the present status of satisfactions derived from the reading of fiction. Data of this type help a teacher in deciding on the particular objectives to be emphasized in the teaching of literature and on the reading materials to be used because comparison of the students' present status with the objectives of literature which the instructor holds indicate the gaps that become the needs of students and provide the basis for specific objectives and selection of material.

The inventory and check list may also be used as a teaching device. The attempt of each student to identify the satisfactions he derives from reading fiction and to recognize the prejudices he holds which block some kinds of reading, together with the clearer picture he gets of the range and distribution of his own reading experience, provides a basis both for individual conference on the part of the teacher of literature and for well-motivated class discussions.

Finally, the inventory and check list provide a means of evaluating this important part of the college program of general education. When the inventory is administered toward the end of the college period or at the end of the course in literature, the results can be compared with the results obtained from the first administration. Changes can be noted both for individual students and for the group in the range and quality of satisfactions derived from the reading of fiction and in the range and quality of the novels which the student has read. This provides a very important appraisal of literature instruction.

Third Project: What Students Think about Art

A third exploration of beliefs of students relating to the humanities was undertaken to provide a means of obtaining data useful in identifying the needs of students in the field of the fine arts. The committee believed that evidence about the students' opinions on art would furnish useful information not previously available to art teachers in their planning. The third project involved the construction of an instrument that could be used in obtaining this information.

The first step in developing the instrument was to ask college students interested in the arts to express in essay form their opinions on art. The topics of these essays were either very general, such as, "What do you think is the role of the fine arts in this world of ours?" or more specific, such as, "What do you think of modern art?" or "What role do the arts play in your life?" The students were assured that they were not supposed to demonstrate their erudition. They were encouraged to present the same viewpoints and to use the same terms as they would use in discussing these problems with their friends. In this way students' opinions about art, couched in their own words, were collected.

The next step was the extraction of several hundred statements from these essays for use in a questionnaire. The questionnaire was planned to permit students to state their opinions by agreeing or disagreeing with, or being uncertain about the items. Many statements could not be used, some because their ambiguity did not permit agreement or disagreement, some because they contained expressions particular to and understood by only a small group. Some of the most interesting statements could not be used because they were obviously made by students whose familiarity with art was so far above average that most students would not be able to comprehend them. Practically all statements had to be reworded. The items finally used were, therefore, not the students' own statements, but were based on them.

A single reaction to a more or less complex aesthetic problem may at times be due to chance factors that do not represent the student's characteristic opinion concerning this problem. Hence, in selecting the items which should be included in the experimental form of the instrument, an effort was made to confront the students with several statements covering the same aesthetic problem in order to reduce the probability of the responses representing chance factors.

The main problems which students discussed in their essays and concerning which, therefore, statements were selected for the experimental form of the instrument were the following: the importance of art (for society, for the individual); the reasons for studying art; the approach to art (ways in which they think one ought to approach art); general opinions on art and the artist. In addition, various other problems were treated by the students

which cannot be easily subsumed under a heading, but which are important as the expression of personal attitudes and opinions. Therefore, some statements dealing with these problems were included, for example: students' thoughts about their own abilities in regard to understanding and to creation, their tendency to identify themselves with artists or aesthetic creations.

Through a process of elimination statements which involved ambiguities or were based on rarely duplicated experiences and did not promise to yield worth-while results were discarded. Two hundred statements were selected for the experimental form and were presented to a group of twenty-two students.

After these students had taken the test, they were asked to indicate which statements seemed difficult to understand, to state their opinions on the areas covered in the test, and to suggest statements which should be added to give students a better chance to express their opinions on art. Most of the criticisms were directed at a weakness inherent in the very nature of the instrument, namely, that it is difficult to decide what is meant by such vague terms as "modern art," or "social problem."

On the other hand, the discussion demonstrated the impracticability of asking questions referring to particular aesthetic problems since class discussion revealed that not only college freshmen, but also upper-class students too, had only rather dim notions of, for instance, what is a classicistic or an impressionistic painting. Paintings by Ingres as well as late paintings by Cézanne and Gauguin were considered impressionistic, whereas typical Baroque paintings were called classicistic. Even when students who claimed to be familiar with paintings by a particular master, such as Gauguin or Cézanne, were asked to describe paintings by them and to tell where they had seen them, it turned out that some had thought of paintings by van Gogh, Picasso, or painters even further removed in time and style. On the basis of a study of the results of this experimental group and of their discussions and criticisms the instrument was revised.

Implications for the Teaching of Art

The revised instrument consisting of 170 statements was given to 246 students in order to explore its usefulness in college teach-

ing of the arts. One college administering the test was coeducational, the other a woman's college. At the time of taking the test all the students were enrolled in some type of art course. The results suggest uses of the inventory in teaching art.

Generally speaking, the students who responded to the questionnaire seemed to need a better understanding of the role of art within the framework of our society and of the aesthetic values which justify the claim of the significance of art for man. The majority of the students tended to evaluate art highly in one way or another, an evaluation which, unfortunately, was not backed by an equally high degree of understanding of the properties of art which might justify such high esteem.

This raises the question of the possible origin of this high evaluation. One likely possibility is that the students place a high evaluation on art because they enjoy art experiences. However, art teachers usually insist that the enjoyableness of art experiences is not the only reason or the main reason for the importance of art to human society. If both notions, the enjoyableness of art and its importance, are equally well comprehended, then their coexistence in the mind of a student need not create confusion. The results of the questionnaire, unfortunately, do not support the hypothesis that students understand where and how to apply these two notions. They think that art courses are "fun," that it is enjoyable to study art. They think, too, that art is one of the most sublime accomplishments and the consummation of a truly humane culture. But the results of the inventory also show that a good many of the students think that in their art activities they undergo the same experiences as the great artist does. The art activities which students enjoy in their studio work are usually only incidentally connected with art as the consummation and true representation of human culture. For anyone seriously concerned with art, it is probably difficult to overestimate what havoc the notion of art as an ultimate human value may work in the aesthetic frame of reference of an average high school or college student if he interprets it in terms of his own art experiences.

This is not only true for his art experiences of the more active type. It holds true, too, for his art activities of the more passive type. What represents art to this average student is more fre-

quently than not: comic strips, cartoons, advertisements, and, at best, the local church building, and, maybe, specimens of the products of the local painters. Added to this is the now popular notion of machine-made art and art in daily life (furniture, for instance). The student thinks that he will find in them the consummation of a truly humane culture. When the teacher speaks of the significance of art to such students, the difference in the notions of teacher and students creates confusion unless the teacher recognizes the situation and plans his treatment accordingly. The teacher can use the inventory in this connection to identify the students' aesthetic frame of reference.

The inventory can also become a convenient starting-point for class discussions clarifying certain misconceptions on aesthetic problems. In the case of the conflicting notions mentioned above, it may be sufficient to point out to students that they think both that in their artistic production they undergo the same experience as the great artist and that great art is the realization of highest human values. If the results of their artistic efforts are presented to them at the same time, it will not be difficult to show them that one of the two statements ought to be considerably qualified, to say the least, before both can be accepted as true.

The students generally accepted a variety of notions about the importance of art. Some thought that art is a very powerful means for influencing people. Experience will teach them that this is not so generally true, an experience which may lead them to discount the importance of art. The results of the inventory may suggest the desirability of explaining to students ways in which art can influence people and produce certain results, thus protecting them against disillusionments which might be detrimental to their future aesthetic lives.

Another sizable group of students was impressed by art because of its high prestige value and was convinced that others studied it only for this reason. Another illustration of a misconception of the importance of art was revealed by the responses to the item dealing with the acquisition of art objects. The majority of the students believe in the importance of art because they think that the significance of art rests on its ability to bestow prestige on those connected with it. This indicates, again, a need for a planned

approach that recognizes the students' status with regard to beliefs; otherwise, further emphasis on art may lead to extra-aesthetic or even anti-aesthetic attitudes.

Another item in the questionnaire which reveals the need for developing a clearer meaning of art relates to one of the most basic concepts of aesthetics, its nonpractical nature. Students had asserted the significance of the practical properties of the study of art. Thus, it seems that some students make aesthetics part of the practical sphere of their lives instead of permitting aesthetic experience to enhance it. They seem unable to comprehend and appreciate the significance of the aesthetic sphere of experience.

This may be a good example of what may happen if a student is prematurely exposed to perfectly good statements on art, such as those asserting that art is important and that aesthetic experiences ought to be part of one's life. To some students it seems that only the sphere of practical experiences is significant, and thus when accepting the doctrine of the importance of art, they logically make aesthetics part of the practical aspects of their lives. It was not clear to them that human life is the sum total of various types of experiences. They have not yet come to understand that the deeper these experiences are and the more different types of experiences accessible to a person, the deeper and richer becomes his life. Obviously, the various types of human experiences are not disconnected and can be separated only for the purpose of scientific investigation. The autonomy of any one of them implies only that values and concepts which are pertinent to it need not necessarily apply to another one, although there may be some values and concepts applying to all of them.

Probably, some of the other strange notions which students expressed originated in their having been exposed to complex aesthetic experiences or confronted with statements dealing with intricate aesthetic problems without previously having developed the necessary understanding and background experience. Hence, they were unable to assimilate the experience: instead of its serving to enrich their frames of references, it remained a meaningless, or compartmentalized, or disturbing alien body.

The analysis of the results of the art inventory clearly shows that in the field of aesthetics the mind of a student who enters the art

class is not a *tabula rasa*. This is true whether or not he has had some previous art courses. Although students' assertions upon entering an art class that they do not know anything about art may be true enough, it never means that they are not full of misconceptions about it. To expose such students even to the "best" aesthetic experiences, whatever these may be, will not necessarily lead to a catharsis of the misconceptions or a clarification of previous erroneous opinions. On the contrary, it may add new confusion because the new and relevant experiences are interpreted in the light of formerly acquired errors.

Better and faster progress in educating students in aesthetic problems might be achieved if, before they are exposed to new aesthetic experiences, some time is spent in finding out what they have thought so far about art and what their previous aesthetic experiences have been. The art inventory provides a means for initiating such a study of students. The results give data of value in selecting objectives for the class. The inventory may also be used at the end of the course to find out what changes have taken place in students' beliefs about art.

Major Projects in the Social Studies

First Project: An Inventory of Social Understanding

WHILE THE INTERCOLLEGE committees in the humanities were working upon major projects, the intercollege committees in the social sciences were also concerned with the cooperative development of a procedure for determining the needs of students and techniques by which each college might develop a program in the social studies designed to meet these needs more effectively.

At the very beginning two aspects of the contribution of the social studies to general education were selected for immediate concern. These were (1) the identification of important *student attitudes*, the descriptions of these attitudes in meaningful terms, the investigation of how these attitudes develop; and (2) the identification of the abilities involved in critical thinking in the social studies and of factors affecting these abilities, and the development of improved procedures for inducing the student to improve his ability to think.

The first stage of this project involved the construction of an instrument or inventory to permit the canvassing of student attitudes. It was planned that this instrument should be used to investigate the student's attitudes with respect to certain social values which are basic to a democratic social order. Attitudes were to be expressed in terms of the student's agreement or disagreement with a number of simple statements. This instrument was not envisaged as an attitude test which would permit fine quantitative and qualitative distinctions. Rather it was seen as an ex-

¹The several inventories developed by the Cooperative Study in General Education may be obtained from the Cooperative Test Service of the American Council on Education, 15 Amsterdam Ave., New York 23, N.Y.

ploratory and diagnostic device which would also furnish many hypotheses to guide further inquiry.

It is perhaps desirable briefly to define the concepts of "attitudes" and "social values" which the central staff held at this time since these constitute the core of the first major project in the social studies. By an "attitude" was meant simply *a student's tendency to act toward certain social values*. By "social values" were meant simply *the objects toward which attitudes are held*, such as the sanctity of the home, women's rights, freedom of speech, the Negro, and the like. The point which should be emphasized is that attitudes are only tendencies to act, but as such they are the initial stages of activity and are essential to its being carried through. Hence, if attitudes toward the social order lie behind, serve as a background for, or motivate action, one way of approaching the real or potential activity of students in society is to take account of the attitudes which they hold. It was acknowledged that this was only one way of studying social action and, therefore, possessed certain inherent limitations which will be made clearer in what follows.

At this point it should be noted that the way in which attitudes are related to social values is essentially the "stuff" with which the educative process deals. Attitudes are simply individualized manifestations of social values and hence a decisive link between any individual and his social environment. In order to elaborate further the concept of the relation between attitudes, social values, and social activity which was held when the first major project was devised, four important questions may be raised. A brief discussion of these four questions will serve to indicate the logical base upon which the enterprise rested.

1. What does the student *think* is important in the social world?

This question is of significance because the attitudes which one holds are an expression of what one takes for granted. If we know what the student takes for granted, we will have considerable information about his conception of the nature of the social world and how he will probably behave in certain situations. It does not follow, of course, that, for example, a certain attitude toward the Negro inevitably and necessarily implies a specific pattern of behavior toward the Negro, but, on the other hand, activities can

indeed be correlated with attitudes with a greater or a lesser degree of probability.

2. What really *is* important, how do we know it, and *who* says so?

A consideration of this question leads us back to the basic proposition that the end of all social knowledge is social action. In the light of the social philosophy to which American society is committed this is the kind of action which is necessary to make democracy work—economically, socially, and politically. It must be recognized then that this question can be answered only in the light of the values suggested by the democratic way of life. In a fascistic or in a communistic society it would undoubtedly be answered in terms of a very different set of social values. Is it possible to get complete agreement among teachers of the social studies upon what are the values of a democratic social order, or upon even those which are of primary importance? Although it was not possible to answer this question in advance, it was assumed at this time (and later experience of the Cooperative Study with the social scientists from the participating colleges has validated this assumption) that at least substantial agreement could be achieved on the most important of these values. Certain basic ideas such as the preservation of civil liberties, the maintenance of representative government, and the achievement of equality of social opportunity would seem to be a matter of common value concern to all teachers of the social studies.

3. What confusions of attitudes and attitude-patterns characterize the student, and how *consistent*, democratic, and liberal would his social behavior be if the attitudes which he holds were translated into concrete programs of social action?

The problem of the consistency or inconsistency of the student's attitudes is important for the obvious reason that, since attitudes condition activity in the social world, they will, if they are inconsistent, make for illogical action and prevent rather than encourage the individual in the achievement of the goals of a democratic society. If students hold attitudes which would lead to the achievement of goals which are contrary to those which he accepts, legitimate social action will be frustrated. This is the kind of knowledge about the student which it is imperative for teachers of the social studies to have. It was anticipated that the proposed

inventory would allow the instructor to find out the extent to which the student lived in a real rather than an imaginary or fantastic social world, particularly with reference to the values which underlie a democratic society.

At this point, too, there emerges the idea that the student does not come to the social studies classroom without previous prejudices and stereotypes and that, in consequence, the social studies instructor must contend not with ignorance alone, but also with a bad or unrealistic previous education. By the use of the proposed instrument it was hoped that information could be derived about the complacency, the naïveté, the prejudices, the information, the critical capacity, the consistency, and the basic democracy of students, and that this knowledge would provide data which would throw much light on making more realistic and effective the objectives, the methods, and the content materials of teachers of the social studies.

4. What is the relation between one's attitudes and his ability to think critically?

It was believed that this relation is a close one. Critical thinking about real issues and actual problems does not take place within a vacuum. The ability to reason logically and to draw conclusions from premises is at once a rational and a nonrational enterprise. It is rational to the extent that the actual methods and principles utilized are drawn from the field of logic and scientific method, but it is nonrational to the extent that feelings, emotions, and attitudes concerning the content of what is being reasoned about also enter in and actually determine the success with which logical principles are applied. Simply to say that the ability to solve problems involves only formal logic or scientific technique does not submit the issue of critical thinking to the test which it receives in the ordinary conditions of life where students find it necessary to draw conclusions, make value-choices, and decide between alternatives on issues which are highly controversial in character and depend upon irrational attitudes and vested interests.

The following example makes this clear. There are many individuals who, accepting the proposition that "All Communists are dissatisfied with the present social order" would proceed to argue conversely that "All who are dissatisfied with the present

social order are Communists." We have here a clear case of the violation of a principle of formal logic, but the mere existence of this logical principle does not prevent individuals from constantly violating it where their prejudices or insecurities relative to the present economic order dictate otherwise. It was hoped that the proposed instrument would deal with the problem of critical thinking in such a way as to provide evidence for the instructor to aid him in his attempt to cause students to think straight about controversial social issues.

It is now possible to summarize the assumptions underlying the new instrument. These were:

1. The activities of students are a function of their attitudes.
2. The attitudes of students make up the value-pattern toward whose change, enlargement, or clarification education must be directed.
3. Some evaluation is possible by competent social scientists of the rightness or wrongness of attitudes judged in terms of the democratic matrix within which these attitudes operate in the American scene.
4. Although agreement between teachers of the social sciences in the evaluation of attitudes may not be complete, the assumptions of social science itself demand that there should be a reasonable consensus.
5. The problem of critical thinking in the social sciences, in contrast with the natural sciences, is complicated by the fact that one deals not with neutral facts but with "facts" freighted with one's preferences and with emotional meanings.
6. One of the greatest sources of confusion in the field of social studies is the failure to distinguish between social facts (propositions whose truth or falsity can be ascertained by the standard methods of science) and social attitudes or preferences or value-judgments (to which exactly the same criteria of truth and falsity are not applicable).
7. With respect to the student, college teachers of the social studies do not start from scratch, and the minds of incoming freshmen are by no means a *tabula rasa*, but, on the contrary, they have had both previous formal education and also experience with the common or "garden variety" of folk wisdom current in

the family and neighborhood group. This experience has given them a picture of the social universe and a predisposition to view all problems from a certain point of view—a picture often contrary to actual social existence and confused from the point of view of social reality.

8. One of the chief purposes of the proposed inventory should be to determine to what degree the student is capable of distinguishing between facts and preferences, to discover the prejudices which he brings from his previous experience, and, above all, to examine the things which he takes for granted.

Construction of the Inventory of Social Understanding

The first step in the construction of the proposed inventory was taken by the central staff. It attempted, first of all, to identify, state clearly, and classify under a more or less logically homogeneous scheme some of the issues and value-conflicts confronting a democratic society. These issues were selected so that the response would give some indication of a student's general social understanding. The following are examples of the kinds of questions in which these issues are raised:

1. Can human nature be changed?
2. Is progress inevitable?
3. What are the democratic limits of individualism?
4. Is economic planning compatible with free private enterprise?
5. Does the consumer, in general, enjoy freedom of choice?
6. What is the relation between the private ownership of the newspaper and the problem of the freedom of the press?
7. Would it be better if the government let business alone?
8. Are some races biologically inferior?
9. Are men always without freedom when they are controlled?

This list is not exhaustive, but it does show some of the major areas of social thinking which are relevant for the teaching of the social studies at the general education level.

The next step was to formulate a number of statements which should indirectly get at the preferences suggested by these questions. These were to be statements toward which the student could register agreement or disagreement, and it was thought desirable

that, in so far as possible, these statements should be phrased in the common-sense language in which they are currently repeated by the man in the street. If this were possible, the inventory would be free from the more pedantic twist of the usual academic inventory or questionnaire and would appeal to the less conscious and more deeply rooted of the culturally determined attitudes of the students. With these ideas in mind the central staff formulated a series of 115 items, including both statement of fact (what is) and statement of preference (what ought to be), about important aspects of the structure and functioning of the contemporary social order. Of these 115 items, 16 were concerned with Democracy, 19 with Individualism, 14 with Government, 31 with Capital and Labor, and 35 miscellaneous, relating to such things as crime, war, minority groups, the newspaper, and the school. A few sample items are the following: "The newspapers are as fair as it is humanly possible to make them." "The average American voter is well enough informed to judge most of the issues in an election." "The public always loses in the long run from successful strikes." "Even if nationalism generally is dangerous, ours isn't." "What is good for business must be good for the American family." By classifying these items either as factual statements or as preference statements, it was hoped that student attitudes could be distinguished. Either they represented the student's factual position or his policy position, and it was assumed that in relating these two, the consistency between the student's knowledge of facts and his judgments about policies could be canvassed.

The original inventory of 115 items assembled by the central staff was used experimentally in a number of the cooperating colleges. Records were kept of scores; item analyses were made. The professors administering the inventory also took the inventory themselves and scored it according to their own judgments. In May 1941 two intercollege committee meetings were held in Chicago in order to revise the inventory and to agree upon its key. The work accomplished by these committees was continued by the central staff and by the participants in the 1941 summer workshop of the Study, and by October the completed inventory was in use.

The completed inventory entitled *An Inventory of Social Understanding* consisted of 150 items of the cliché type. To each of these 150 items the student could respond in one of five ways. He could mark the statement "1" if he thought it *could be proved to be true*; he could mark it "2" if he thought it *could be proved to be false*; he could mark it "3" if he agreed with it or had a *preference for it although it could not be proved true*; he could mark it "4" if he disagreed with it or *rejected it although it could not be proved false*; and he could mark the item "5" if in his opinion it fell in none of the above four classes. The 150 items on the inventory were classified according to a key which was agreed upon by the central staff and the social scientists from the participating colleges.

Perhaps a word more is in order about the items which were keyed "5." These items are essentially ambiguous. They cannot be verified because they make no definite statements, and in most cases they cannot even be stated as a preference since they are not specific enough to indicate a preference which would hold in *any* situation. The items keyed "5," therefore, have the character of folk-sayings. They are stereotypes which are so common and well worn that they have come to mean everything and nothing. How they are answered gives more information about the emotional make-up of the student and his lack of critical insight than about his factual knowledge or his system of social values. For example, consider item 62, keyed "5": "The morals of this country would be better if people went to church more." And did what in church? Slept through the service? Went through the forms of religious observance? What kind of morals is meant? Those of one church or those of another? Is it true that moral persons are those who go to church, or the other way around? Unless one takes the stand that there is only one religion which is best and that all others are wrong, and that going to church is a way of inculcating this system of morals, we cannot avoid keying this item "5" for there is no common agreement as to what the proposition means, what the hypothesis proposes, what moral criteria it appeals to, or what might constitute evidence in its favor. In the absence of these contexts of meaning the statement actually operates in most cases as a rather thoughtless cliché.

It is thus a social password, an example of the merely ceremonial use of language. One must utter it or deny it upon the appropriate occasion in order to keep one's status and good standing in the group. If a student marks the item "5," he is not, therefore, expressing a lack of religious faith. He is simply indicating his understanding of the ambiguous nature of the item. He is perhaps himself recognizing that this is merely a folk-saying which is a part of his culture.

The scores for an individual student on the Inventory of Social Understanding were established in the following way. He received three primary scores and nine scores derived from different categories into which the various items of the inventory were divided. His first or *over-all score*, supposedly indicative of his social understanding, was simply the percentage of times which his answers agreed with the key for the entire 150 items. His second large score was called *fact error*. This score represented the percentage of times which he marked false statements as true or true statements as false, in short, the number of times he was mistaken on factual grounds. The third score, entitled *preference as fact*, represented the percentage of times he marked statements "1" or "2" which, according to the key, should have been marked either "3," "4," or "5," that is, registered his tendency to call statements factual when they were in reality merely preferential.

The over-all score of the student, based upon his agreement with the key for all 150 items of the inventory, was taken as representative of his general social understanding. It is, of course, fair to say that this indicates his social understanding only if there is agreement that the way in which the 150 items were keyed does indicate the proper response to these items. The fact-error score was used as a simple measure of information or lack of information on the part of the student. The preference-as-fact score indicated the disposition of the student in the direction of dogmatism or, stated more accurately, the times when he felt that statements were true or false although the makers of the key believed that there was no evidence available to prove them either true or false. These items, therefore, were either acceptable or unacceptable preference statements from the point of view

of the social scientists who constructed and keyed the inventory.

In addition to these three scores, nine other scores were derived for each student. Of the total of 150 statements in the inventory, 90 of them were classified in nine sets of ten statements each. Although the purpose of these groupings was to determine the place of the student on a scale ranging from extreme conservatism to extreme liberalism, it was recognized that to classify students under them might be a somewhat dangerous and indefensible policy. Therefore, instead of classifying the student by the use of these highly emotional terms, it was thought better to canvass his position according to a more objective set of categories. For each of these nine groups of ten statements, a single key statement or summarizing statement was chosen. The key statements for the nine categories canvassed by the inventory follow:

1. The basis of economic-class conflict does not exist in America.
2. Everyone has the opportunity to improve his social position or to better his circumstances as much as he really wants to.
3. It is immoral and generally harmful to interfere with private enterprise.
4. Having a good will and honorable intentions is alone sufficient for social improvement.
5. Social control, rationally planned and extensive enough to cover the interdependent world, is either unnecessary or undesirable.
6. Capitalism is sanctioned by natural law and the moral conscience.
7. Our nation is best, our wars are always just, and aliens are to be regarded with suspicion.
8. Our world is so chaotic that it is useless to try improving even one's personal situation.
9. The tradition of family and church have not changed and are still adequate guides to the good life.

The central staff did not assert that these sentences were the most adequate which could be found to express the common element in the ten statements from the inventory subsumed under each. These representative statements do, however, identify significant and prevailing conservative values in our society. Therefore, the student responses to them, whether of agreement or disagreement, are significant in assessing the general value-position of the individual. If, for example, responses to individual items show that a student believes that "The basis of economic-

class conflict does not exist in America" and that in consequence he believes that "One has the opportunity to improve his social position or to better his circumstances as much as he really wants to," then the readiness of that student to deal with the problem of economic inequality in America is quite different than if he had disagreed with these two statements. Instruction in the social studies on so important an issue as economic and social inequality would seem to be dependent upon a knowledge of what students take for granted in these areas. In exactly the same way, if a student holds that "Having a good will and honorable intentions is alone sufficient for social improvement" and that "The tradition of family and church have not changed and are still adequate guides to the good life," the practical consequence of these beliefs tends to be a laissez-faire attitude toward social control and the rational planning of social change. This is information which the teacher of the social studies needs to have!

Revision of the Inventory of Social Understanding

The hypothesis behind the method of scoring described above was that in the field of social science it is of the utmost importance to distinguish between statements of fact on the one hand and statements of preference or value-judgments on the other. Students were given the choice, therefore, of answering the 150 items on the inventory with one of five different responses. This method of responding to the items was found to offer certain rather serious difficulties. In the first place, experts in the social sciences themselves in many cases could not agree upon whether a certain item really was a faulty statement or a judgment of preference; and, in the second place, this difficulty led to further problems of what constituted "proof" in the field of social studies. It was still agreed that the distinction between fact and value in social science is one of the most crucial of our problems, but it was agreed also that the present instrument was simply not sufficiently sharp to get at this problem. The fact that the items on the inventory were chiefly clichés and, therefore, in many cases, extremely ambiguous only highlighted this conclusion.

As a result it was decided to consider the inventory simply as an instrument for getting at attitudes or opinions or beliefs,

leaving open the question whether these are arrived at on the basis of factual or value-judgments. The revised directions presented, therefore, a threefold choice. The student marked an item "A" if he favored, approved, or accepted it; "D" if he did not favor, disapproved, or rejected it; or "U" if for some reason he was unable to approve or to disapprove of it.

The chief assumption underlying the revised key was that where there is not unanimous agreement on the part of competent and informed social scientists, there is less value in imposing the will of the majority than in leaving the item unkeyed. The revised key, therefore, represented the unanimous agreement of fourteen persons from nine colleges who sent information about rekeying the instrument and the unanimous agreement of seventeen social scientists from fifteen colleges who participated in the intercollege committees in social science.

Not only were the items on the inventory rekeyed, but also the categories previously used were totally reconstructed. The categories of the first form of the inventory, as explained previously, were nine in number and each category was composed of ten items. Because some of these categories were found to overlap and because, in addition, in selecting the same number of items for each category, it was found that in some cases homogeneity of items in the category was being sacrificed for mere sameness of size, no attempt was made to have the revised categories consist of the same number of items. They, therefore, represented not so much categories superimposed on the 150 items of the inventory as categories growing out of the items as they might more usefully be grouped by those actually teaching in the social science field. The revision included seven categories, as follows: Economic Understanding (19 items); Political Understanding (15 items); Understanding of Democracy (17 items); Understanding of Government versus Private Enterprise (12 items); Understanding of the Labor Situation (7 items); Understanding of Equality of Opportunity (9 items); Understanding of Public Opinion (11 items).

In addition to scores on each of the seven categories the score sheet of the revised inventory contained three other scores. These were respectively (1) an over-all score on the 112 items

keyed either "A" or "D" and called *general social understanding*; (2) a score consisting of the number of times which a student has marked these 112 items as "U" and thus indicative of his *unwarranted uncertainty*; and (3) a score on 15 items which are keyed "U," indicative of his *warranted uncertainty* or *discrimination*.

Since the ways in which inventories can be and have been used in the colleges have already been described in connection with the inventories in the humanities, it will not be necessary here to describe them again in detail. The Inventory of Social Understanding was first used with students just beginning work in the social studies to serve four purposes: (1) The identification of needs of students, that is, gaps between their present social understanding and that required for effective participation in contemporary society. The identification of these student needs gives an important basis for planning the social studies courses in the college. (2) The identification of individuals whose patterns of social understanding markedly vary from those typical of the group. These individuals were given special consideration in planning so as to provide opportunity for them to meet their peculiar needs through additional reading, discussion, and the like. (3) The provision of a concrete basis for instruction when the discussion of the inventories becomes a teaching device. In some of the colleges after the inventory had been taken and scored, the results were given to students to provide a stimulus for discussion and study. (4) To provide a base line in measuring progress made by students in their social studies work.

The inventory was also given to students who had completed work in the social studies, and by comparing the results with those obtained at the beginning, it was possible to note what progress was made in developing a more adequate social understanding on the part of each student.

Second Project: An Inventory of Beliefs about Postwar Reconstruction

The beginning of World War II greatly affected the cooperating colleges not only in terms of enrollment, but also it markedly shifted student attitudes toward various parts of the curriculum.

In general, a greater interest developed in mathematics and the natural sciences, but there was also a shift in focus in relation to the social studies. A basic principle upon which the Cooperative Study was operated was the importance of continuing study of students to provide significant information as a basis for curriculum planning. Hence, in November 1942 over 1,500 students representing the four undergraduate classes of thirteen colleges of the Study wrote essays in response to the question, "What difficulties or concerns have you experienced or do you expect to face as a result of the war?" The essays in reply to this question were, as might be expected, highly heterogeneous. But despite an almost universal involvement in the immediate war situation an unbelievably large number were, in addition, perplexed about problems of general social policy and of the kind of world in which they would live once the war was over.

This concern about social aspects of the postwar world appeared to the staff of the Study to be a significant basis for motivating social science education if the curriculum could take proper account of it. Furthermore, a project designed to examine the implications of postwar problems for social science education and to identify student understandings in this area would provide a framework in which all the social studies in college and university could profitably be involved.

Construction of the Inventory of Beliefs about Postwar Reconstruction

A new project was begun about the middle of November 1942 by canvassing the writings and publications relating to problems of postwar reconstruction and by specific inquiries to find out exactly what government agencies and private organizations were doing concretely in the field of postwar planning and what problems seemed to them to be of primary importance in this area. On the basis of this preliminary investigation, a tentative inventory of 100 items was constructed and sent out for criticism to various social scientists in the cooperating colleges, in the University of Chicago, and elsewhere. In addition, the tentative inventory was administered experimentally to about one hundred persons chosen from the student bodies of four of the colleges.

Finally, seven members of the social science staff of Iowa State College took the inventory and made detailed criticisms, as did the students from Muskingum College. The results of these criticisms and preliminary use provided a basis for revision and the addition of 50 more items covering areas of importance which the first form of the inventory had neglected.

During February 1943 two intercollege committee meetings in the social studies were used to review the previous work done on the inventory and to create it in its finished form. The committees considered one by one the proposed 150 items of the inventory, throwing out those that they considered inappropriate, improving the wording of items which were ambiguous or unsatisfactory, and adding items when necessary. Most important, the items were keyed as they were being passed upon. No item was either permitted to remain in the inventory or keyed unless there was unanimous agreement by the committee participants. As a result of the committee's labors, the inventory called *An Inventory of Beliefs about Postwar Reconstruction* was ready for use in the spring of 1943.

This inventory was planned to consist of items selected from issues concerning the nature of the postwar world which would give some insight into the student's attitudes toward postwar reconstruction, the degree of his awareness of the issues involved, his understanding of the knowledge available in the field of social science relating to these issues, the consistency of his thinking in these areas, and the degree of his sensitivity to the need for institutional change in the postwar period. Therefore, the inventory sought roughly to answer the following five questions:

1. *What are the students' beliefs about postwar reconstruction?* Is he in favor of American isolation or of some form of international cooperation? Does he favor cooperation of a merely political character, or does he also believe in the necessity of international economic controls?

To what extent does he believe in American imperialism? Is he in favor of our taking over those areas of the world whose raw materials we need, or does he believe that the distribution of world-trade and raw materials should be determined by all nations in a democratic manner?

What are his beliefs about our domestic economy after the war? Does he believe that we will have a severe depression? Does he believe that our level of living will be severely reduced? Does he believe that we shall have to live frugally so as to pay off our war debt?

What is his attitude toward the relation between government and private enterprise? Does he believe that private enterprise alone and unaided can reconvert itself to peacetime requirements, or does he think that increasing government intervention will be necessary to do the job?

What are his attitudes toward minorities in the postwar world? Does he exhibit prejudice against members of the yellow race, against Negroes, against Jews?

What is his attitude toward foreign nations? Is he suspicious of our allies? Does he feel that England got us into the war? Or that we cannot associate at the peace-table with communistic Russia? How does he feel about our enemies? Does he feel that Japan and Germany are inherently more bloodthirsty than the United States? That they must be severely punished? Or that they are to be readmitted into the society of nations?

Does he evince an attitude of futility toward the postwar world? Does he believe that the world-situation is the result of brute forces, or does he have faith that these can be rationally controlled?

2. *How aware is the student of the issues involved?* Does he believe that if we are economic isolationists we can preserve better the system of private enterprise? Does he believe that international organizations must have power to impose their decisions on all member-states? Does he believe that we will have a depression after the war because economic forces make it inevitable? Is he against foreigners because he believes that they make undesirable American citizens? Does he feel that we can prevent depressions by increasing international trade? Does he believe that nations with the largest population have the best chance for survival? Is he intolerant of backward peoples because he believes that they lack the capacity for the finer things of life which the white races appreciate? Does he believe that American trade policies regarding the Caribbean area have always been directed toward

the welfare of the Latin American peoples themselves? Does he believe that if the government owned and operated the munitions industry the danger of recurrent wars would be reduced? Is he aware that we can often pay much higher wages in the United States than oriental countries and still undersell them in the world-market?

3. *How confused or generally consistent is the student in his beliefs?* Does he believe that all world waterways should be available to all nations without discrimination and at the same time that the United States should retain the exclusive right to decide how and by whom the Panama Canal should be used?

Does he believe that our commercial policies should be subject to review by an international organization and at the same time believe that the United States should retain complete control of its own money?

Does he combine a belief that one of our greatest problems is to reduce the hatreds caused by the war with a belief that the German and Japanese people are inherently more bloodthirsty than the people of the United States?

Does he hold both that the federal government should retain more economic power than it had before the war and that if the government increases the amount of its economic planning we are sure to have dictatorship?

Does he believe that after the war the United States will witness the greatest depression in its history but that there will be just as much chance for a poor man to climb the economic ladder as there ever was?

4. *Does he have relevant social science information?* Does he understand political principles as these are relevant to the problems of postwar reconstruction? Does he believe that the failure of the League of Nations means that the principle of collective security has been tried and found wanting? Does he understand that any nation which does not have free elections from time to time is undemocratic? Does he believe that our foreign policies since 1918 are partly to blame for World War II? Does he believe that British policy in India has always been directed primarily toward the welfare and development of the Indian peoples them-

selves? Does he believe that a good citizen should not criticize the acts and policies of his government?

Does he understand economic principles in their relevancy to the problems of postwar reconstruction? Does he believe that the huge public debt which we are now accumulating isn't any different from a private debt except in size? Does he believe that tariffs always raise the cost of goods? Does he believe that depressions are caused by overproduction? Does he understand that in the long run the only way a country can obtain payment of its foreign debts is to accept foreign goods and services?

5. *Is he sensitive to the need for institutional change?* Does he believe that war always has existed and always will and there is little that can be done about it? Does he believe that our policy should be to end discrimination against the Negro? Does he believe that the American market should be preserved for the American farmer? Does he believe that the postwar slogan should be "back to normalcy"? Does he believe that the United States should undertake a plan to reduce poverty even though this would add to the national debt? Does he believe that the American economic privileges in China should be returned to their prewar status? Does he believe that the American way of doing things is always the best way?

An Inventory of Beliefs about Postwar Reconstruction was not produced aimlessly, but with several definite hypotheses in mind. That is, there were several theories suggested by past teaching experience in the field of social studies about the kind of responses which might be expected and the kind of possible responses which would be significant and suggestive to a social studies teacher. Obviously, in the nature of the case these hypotheses were only tentative and their verification or disqualification was thought to depend upon the actual pattern of student responses when the inventory was administered.

The first hypothesis is that it is a common and recurrent human characteristic to make broad, general statements without at the same time recognizing the specific beliefs or courses of action to which these logically lead. Presumably this characteristic is found in dealing with social studies materials as well as elsewhere. Many

persons can be expected to make broad generalizations about peace and the desirability of international cooperation while being ignorant of, or actually opposing, the measures which these imply in terms of close-to-home behavior or when our own nation rather than some other nation is involved.

In testing this hypothesis it was thought useful to include in the inventory both very general statements about foreign and domestic policy and some more specific items with which they might be compared. For example, item 12, "After the peace all world waterways should be available to all nations without discrimination," is a general statement which might be compared with the more specific item 135, "Even though an adequate international organization is developed after the war, the United States should retain the exclusive right to decide how and by whom the Panama Canal should be used." Item 18, "Backward countries should not be protected by any single country but rather by international commissions," is a general statement which might be compared with the more specific item 66, "The United States should take over the rubber-producing territories in the Far East in order that we will never face another rubber shortage."

The second hypothesis may be explained as follows: Although the inventory dealt primarily with the period of postwar reconstruction rather than with what might somewhat loosely be termed "normal times," and although the responses were made in a time of war crises rather than in a time of peace, there is some reason to believe that the general issues of social policy remain substantially the same in peacetime and in time of crisis. Although they are given new verbal expression and new settings, the same issues which are matters of disagreement and conflict in peacetime economic and political life will crop up as issues of postwar reconstruction. Issues of this sort are those of race relations, rights of labor versus rights of management in industry, government control of business versus laissez-faire, and the like. The new inventory sought to examine this hypothesis and has been affected by the hypothesis in two ways. In the first place, the hypothesis is responsible for at least three of the eight categories in terms of which the inventory is scored. These categories are Government versus Private Enterprise, Race Relations and Minorities, Under-

standing of Democratic Principles. In the second place, an effort was made to canvass student attitudes on these basic questions by including appropriate items. For example, to canvass attitudes toward the power of various groups in our national life, the following five related items were included for comparative purposes:

- 13. After the war the power of organized labor should be increased.
- 49. After the war the power of the small business man should be increased.
- 90. After the war the power of industrial leaders should be increased.
- 107. After the war the power of the farmer should be increased.
- 125. After the war the power of government officials should be increased.

A consequence of this second hypothesis is that although the new inventory is chiefly concerned with the subject expressed in its title, it at the same time provided for the social scientist information about student attitudes toward the problems of social policy generally.

The third hypothesis included in the planning of the inventory may be explained as follows: The construction of any inventory of beliefs about postwar reconstruction inevitably depends upon some major judgments about the relevance and importance of the items of which it is composed. Growing out of the subject matter itself was the conviction that an important distinction in the field was that between domestic problems and international problems. This distinction is made with full realization that domestic problems and foreign problems are so interrelated as to be parts of one seamless web. Their separation for purposes of scoring the inventory was simply a device of analysis. The first four categories, therefore, fall in the field of international relations; the fifth is called Understanding of Domestic Postwar Economy.

A word more needs to be added about these first four categories. It seems to be a matter of common experience among the social scientists who have dealt with the subject of international relations that the chief problems in this field grow out of the strength and persistence of the feelings, attitudes, and governmental policies associated with the somewhat ambiguous term "nationalism." The most comprehensive distinction covering the field of the relations between states in the modern world in war

and peace is that of nationalism versus internationalism. It is when one begins to analyze nationalism into its component parts that certain difficulties arise. In addition to psychological aspects, economic and political aspects may be clearly distinguished. Indeed, because rates of change are different for the various parts of our social culture, there is reason to believe that politics and economics in the field of foreign relations are not at corresponding levels. Many social scientists have noted a lack of congruence between what Delaisi has called "political myths" and "economic realities." Students can at one and the same time espouse political nationalism and economic internationalism, or vice versa. This consideration has highlighted the urgency for some analysis of nationalism as it expresses itself in the opinions and judgments of students.

The inventory distinguishes three aspects of nationalism: Political Nationalism (which might be epitomized in the statement, "Our nation is best, our interests come first, and foreigners are to be regarded with suspicion"); Economic Nationalism (which might be epitomized in the statement, "It is to the advantage of the United States to protect itself from foreign economic competition and to make itself as economically self-sufficient and self-contained as possible"); and Imperialism (which might be epitomized in the statement, "The United States should assume control of those areas of the world whose raw materials or trade would be of advantage to her"). These constitute the first three categories of the inventory and are to be contrasted with the fourth, Internationalism (which might be epitomized by the statement, "International cooperation and the establishment of various international agencies and organizations is the way to peace and should be encouraged").

And now, having described the rationale of the new inventory, what was its final form? The completed draft of *An Inventory of Beliefs about Postwar Reconstruction* consisted of 150 statements. As previously stated, these 150 statements were drawn from controversial questions of public policy, from principles and factual materials of social science, and from the attempt to apply the principles of social science to questions of public policy. On each of these 150 items the student taking the inventory is

asked to *accept the statement* or to *reject the statement* or to *indicate his uncertainty* regarding it.

There was relatively little difficulty in the keying of the 150 items on the new inventory since unless it was possible to obtain unanimous agreement of the seventeen social scientists who attended the intercollege committees, no item was included. There is moderately equitable distribution of items demanding an acceptance and those demanding a rejection, and a reasonable number of items requiring a response indicating uncertainty.

It was agreed to score the inventory by the use of eight categories of items. These categories are respectively (1) Political Nationalism, (2) Economic Nationalism, (3) Imperialism, (4) Internationalism, (5) Understanding of Postwar Domestic Economy, (6) Government versus Private Enterprise, (7) Race Relations and Minorities, (8) Understanding of Democratic Principles. The reasons for choosing just these eight have been more or less explained in the preceding pages dealing with the hypotheses underlying the inventory. Each of these categories is composed of ten items, and a student's score on the category indicates the number of times he has agreed with the key on the items composing the category.

One last word about the categories. There was no pretense that these eight exhaust the possibilities of the inventory. They were simply those which seemed to promise information and insight of greatest interest and importance to teachers of the social studies. Nor was there anything fixed or final about the inclusion of the ten items which composed each category. They were, of course, chosen with the purpose of making the category just as tight and homogeneous as possible. But their choice was experimental, and it was understood that should experience demonstrate the inadequacy of any of these items, they would be abandoned and replaced by others which it was hoped would have greater adequacy.

In addition to the scores on each of the eight categories the summary sheet for the inventory contains four other scores. These are respectively: (1) an over-all score on the total of the 150 items which compose the inventory; (2) a score representing the *unwarranted uncertainty* of the student; (3) a score on the seven-

teen items on the inventory which should have been marked "uncertain" and indicative of the student's *warranted uncertainty*; and (4) a score entitled *nationalism* which is simply the sum of his scores on the three categories of Political Nationalism, Economic Nationalism, and Imperialism. A brief explanation of how these scores are derived follows:

The over-all score represents the number of times the student has agreed with the key on the 150 items of the inventory. The maximum possible score is, of course, 150.

It is of some importance to measure the degree of unwarranted uncertainty which a student displays. Since on the 17 items keyed as "uncertain," this is the appropriate response and does not show ill-advised uncertainty, the score neglects these items. The student's unwarranted-uncertainty score is based on the number of times that he gives the response of "uncertain" to the 133 items which are keyed either as "accept" or "reject," and the highest possible score is 133. Needless to say, a high score here is undesirable.

The 17 items in the inventory which have been keyed as "uncertain" have been so keyed either because they are warranted uncertainty—semantically ambiguous, because they are matters of pure opinion, or because the evidence for or against them is too uncertain to warrant either an "accept" or "reject" response. If, therefore, a student responds with either "accept" or "reject," he indicates a lack of discrimination. The student's score under this heading represents the number of times he has responded to these 17 "uncertain" items properly. The highest possible score is 17 and the higher the score, the greater the discrimination of the student. Note, however, that some caution must be exercised in the interpretation of this score, for it may indicate not so much the discrimination of the student as his general uncertainty. For this reason it should be interpreted with the student's score on the preceding item of unwarranted uncertainty also in mind. In general, it indicates discrimination only when the student's unwarranted-uncertainty score is *low* rather than high.

The score for Nationalism is not based on any unique items on the inventory. It was explained under the third hypothesis that the inventory distinguishes three aspects of nationalism. These were made separate categories as Political Nationalism, Economic

Nationalism, and Imperialism. The Nationalism score is simply the sum of the scores on these three categories. Since each of them contains ten items, the largest possible Nationalism score is 30. The *lower* the student's score on this heading, the stronger is his feeling of nationalism—political, economic, and imperialistic.

This inventory was used in the same way as the other inventories already described to identify student needs as a basis for curriculum planning, to serve as a concrete stimulation for study and discussion, and to provide an instrument to appraise the effectiveness of social studies instruction. The inventory proved particularly helpful in planning vital and significant social studies courses of great interest and concern to students during the war and the immediate postwar period.

The Major Project in Science

THE INTERCOLLEGE COMMITTEES in the natural sciences were the first to outline and conduct a major project to serve as a cooperative attack upon problems of concern to most of the colleges. As the science committees discussed the question of the ways in which scientific knowledge and the disciplines of the sciences could contribute more significantly to college students, two major fields of contribution were recognized. The first was the contribution which science can make to the more intelligent handling of problems of personal and public health. The second was the contribution of science to the more intelligent utilization of natural resources.

The Health Inventories

The field of health was chosen as the first area of cooperative study to provide information about student needs which would be helpful in planning and developing the science curriculum. After considerable discussion the decision was made to obtain information on the following questions:

Are the health practices of students consistent with the conclusions and findings of medical science? Are the practices in which students engage likely to be harmful or beneficial to personal health?

Are students able to judge the validity of health practices? Do students know the difference between "good" and "poor" health practices?

Are the practices of students consistent or inconsistent with their judgment of the validity of the practices?

How well are students informed concerning problems of personal health?

Are students more certain than they should be with respect to

the accuracy of their health information? Are their convictions deeper than the extent of their information?

In what kinds of health problems are most students interested?

Are students interested in health problems in which they are well informed or poorly informed?

To what extent do students subscribe to desirable or undesirable beliefs relating to health? For example, to what extent do they subscribe to the general premise that every individual has a responsibility to maintain at a maximum his own health as well as the health of others?

How do students justify courses of action in dealing with health problems? In terms of science principles? By analogy? By using irrelevant ideas?

How well do students interpret evidence concerning health problems?

To what extent have students developed the skill of judging the validity and reliability of sources of health information?

An analysis of these questions reveals that the data to be obtained from students include their practices, information, judgments, beliefs, interests, and ways of thinking about matters relating to health. This analysis does not, however, define just what aspects of the total health field to include in the proposed inventory. Fortunately, the staff and the intercollege committees in science were able to draw upon investigations and reports relating to the health of adolescents. The chief sources were the work of Diehl and Shepard,¹ D. Oberteuffer,² the American Medical Association,³ the Science Sub-Committee of the Commission on the Secondary School Curriculum,⁴ and the reports of the American Youth Commission.

These sources were searched for health problems on the basis of essentially two criteria: the frequency and seriousness of health

¹ Harold S. Diehl and Charles E. Shepard, *The Health of College Students* (Washington: American Council on Education, 1939).

² *Health and Physical Education Series*, Vol. III (Columbus: Ohio State Department of Health, 1932).

³ An unpublished classification of requests (about five thousand in 1940) for information concerning health problems.

⁴ Commission on Secondary School Curriculum, *Progressive Education Association, Science in General Education* (New York: D. Appleton-Century Co., 1937).

problems. The health problems which were identified from these studies were classified into five major groups:

1. Personal appearance, hygiene, comfort.
2. Diet, nutrition, elimination.
3. Operation of the body.
4. Organic, physical, and chemical health hazards.
5. Reproduction and heredity.

The detailed outline of health problems resulting from the analysis of the previous studies of personal-health problems was criticized and modified by science instructors of the cooperating colleges during intercollege committee meetings and the 1940 summer workshop. This outline was developed for the purpose of identifying the most frequent and serious types of health problems likely to be found among persons of the age of college students. The outline did not represent a logical or systematic development of health knowledge to be used as the subject-matter outline of the curriculum. Neither is the outline assumed to include all possible health problems.

One of the sources of identifying health problems, namely the classified list of questions which had come to the American Medical Association from every part of the country and from many kinds of people, was mainly valuable as a test of the validity of the original analysis. This source was found after the outline of problems had been developed from the other sources. A comparison of these questions with the list developed from the other sources gave a comprehensive check on the validity of the original outline, for only a few minor additions were necessary to include all of the American Medical Association's classification.

Having identified the types of health problems to be included in the inventories and the types of data to obtain, the central staff constructed six tentative inventories during the spring of 1940. The six included an inventory of each of the following: health activities, health information, health interests, health attitudes, analyzing health problems, and judging sources of information in health problems. The tentative inventories were given in four colleges during the spring, and the results were available for study by the science instructors attending the 1940 workshop.

The workshop group then made three types of revisions in the

inventories. The first was to extend and improve the sampling of the several types of health problems. The second kind of revision involved the improvement of the sampling of kinds of data to be obtained from a given inventory, while the third kind of revision involved changes in the wording of individual items in order to reduce ambiguity of response. The six inventories resulting from these revisions may now be described.⁵

1. Health Activities

This inventory was designed to obtain two types of information: (1) the extent of student participation in desirable and undesirable health practices; (2) the student's estimate of the validity of certain health practices. It asks the students to respond to each of 100 practices relating to personal health according to the following directions.

This inventory should not be taken in the spirit of a test—instead it should be considered as a questionnaire on your health practices. The evidence obtained by the use of this inventory is to be used in an attempt to determine ways in which the educational program of your school may be improved. Therefore, you are invited to express yourself frankly in answering these questions.

Part I. The following list of 100 items represents some of the things in which people engage. Read each item, and in the blank on the answer sheet corresponding to the number of the item, mark:

A — if you frequently do it—or if it happens to you frequently.

U — if you occasionally do it—or if it happens to you only occasionally.

D — if you never do it—if it never happens to you.

Part II. After you have answered these 100 items according to the directions above, go back to the first item and, starting with space 101 on the answer sheet, mark the first 70 items again:

A — if you believe the practice to be a sound one, that is, if you believe the practice is substantiated by scientific principles.

U — if you are uncertain about the soundness of the practice, that is, you are not sure whether the practice can be substantiated or is contradicted by scientific principles.

⁵The Health Inventories—1.1., Health Activities; 1.2, Health Information; 1.3, Health Interests; 1.4, Health Attitudes; 1.5, Analyzing Health Problems; 1.6, Judging Sources of Information in Health Problems—developed by the Cooperative Study in General Education may be obtained from the Cooperative Test Service of the American Council on Education, 15 Amsterdam Ave., New York 23, N.Y.

D — if you believe the practice to be an unsound one, that is, contrary to scientific principles.

The types of health problems sampled by these items about student practices included: problems of personal appearance, hygiene, and comfort (22 items); problems of diet, nutrition, and elimination (23 items); problems relating to the operation of the body (28 items); problems dealing with organic, physical, and chemical health hazards (27 items).

Two questions arose in interpreting the results. One had to do with "frequency of participation." How often must a particular practice occur for it to be "frequent"? How often, for the participation to be "occasional"? This uncertainty was obviated in part by omitting the "occasional" response from the scoring. The second question involved the validity of the students' responses. Are they truthful? If there is good rapport between students and faculty in a given college, there is little basis for questioning honesty of response since the inventory had nothing to do with grading or marking. As a test of the honesty of response, certain check items were included in the preliminary form. One such item was "Do you eat a little food between meals?" About 95 percent of the students answered "yes" to this item. This is consistent with the results to be expected from honest reactions.

2. Health Information

This inventory was designed to obtain three kinds of information: (1) the accuracy of the student's appraisal of factual statements concerning health problems; (2) the extent of the students' convictions of the accuracy of their appraisal of factual health statements; (3) the types of health problems concerning which students think that they are uninformed.

In order to obtain this information, the student is asked to react to each of 100 statements according to the following directions:

The purpose of this inventory is to determine the extent of your knowledge of certain kinds of health information. Read each of the following statements *carefully* and then on the answer sheet which has been given to you, mark the space in

Column 1 — if you believe the statement to be true to the extent that you would not hesitate to act on the basis of its implications.

Column 2 — if you believe the statement is probably true, that is, *more true* than *false*.

“ 3 — if you are completely uncertain about the statement, that is, if you cannot decide as to its truth or falsity.

“ 4 — if you believe the statement to be probably false, that is, *more false* than *true*.

“ 5 — if you believe the statement to be false to the extent that you would reject any action based on its implication.

A student's appraisal of a given item was counted as *right* if marked “1” or “2” for the “true” items or if he selects “4” or “5” for the “false” items. His response was counted as *certain* if he marked “1” or “5” regardless of the truth or falsity of the item. His “3” responses were called “uncertain.” A comparison of the several scores of an individual or a student group will reveal the kinds of items on which the students are misinformed and so set in their misinformation that they would take action on the basis of it. For another item or group of items the students may demonstrate a high percentage of correct response but a low percentage of “certainty.” Identifying the ways in which students regard the accuracy of their information is frequently helpful in planning the teaching program. Thus, if students have strong convictions concerning certain kinds of misinformation, the instructional program which deals with that information must be particularly well planned. The instructor's selection of demonstrations, his suggested laboratory work, the selection of reading must all be such that the students recognize clearly the basis of their misinformation.

The items in this inventory are distributed as follows: 20 items are devoted to information concerning Personal Appearance; 24 to Diet, Nutrition, and Elimination; 20 to Operation of the Body; 20 to Organic, Physical, and Chemical Hazards; and 16 to Reproduction and Heredity.

3. Health Interests

This inventory was designed to obtain two types of information concerning the students' health interests: (1) Does the student have a desire to study certain types of health problems? (2) Is the student's interest in a given health problem such that he wants to study the problem as a part of his college program?

To obtain these data the student is asked to react to each of 129 questions according to the following directions:

Your school wants to determine the kinds of health problems which are of greatest interest to you. Your reaction to the questions below will aid us in defining such interests. Imagine that you were to seek the answer to each question. Mark the answer sheet as follows:

A—the question is *interesting* and *should be dealt with* in school.

U — the question is *interesting* but *should not be dealt with* in school.

D — the question is *not interesting*.

The items were distributed among the major types of health problems as follows: Personal Appearance, Hygiene, and Comfort (24 items); Diet, Nutrition, and Elimination (21 items); Operation of the Body (36 items); Organic, Physical, and Chemical Hazards (36 items); and Reproduction and Heredity (22 items).

The student's responses were tabulated in terms of "in school" interest and "out of school" interest. For a given category of items, for example, items dealing with Personal Appearance of which there were 24, a given student may indicate an in-school interest for 14 of the items. An out-of-school interest may be indicated in 5 of the items. This student would, therefore, indicate an interest in a total of 19 problems and a lack of interest in 5 of the problems.

In general, it was assumed in developing the Inventory of Health Interests that an in-school interest could be considered greater than an out-of-school interest. If a group of students were to indicate an out-of-school interest in a large number of the items, their interest would be considered less than that for another student group indicating an in-school interest for the same number of items. A low total score of in-school interest and out-of-school interest was assumed to represent least interest. Although this general assumption is probably true for most students and most groups, a high out-of-school interest score may be interpreted in another way, especially when the out-of-school interest is high for one particular type of health problems. Thus, a group of students may have an intense interest or concern for problems of reproduction and heredity. Because this group of students may have very conventional or orthodox views concerning the college curriculum, the students may indicate their interest by high out-of-school interest scores.

4. Health Attitudes

Health attitudes when analyzed are usually found to consist of two major elements. One of these elements involves health information, that is, questions of fact. The other element usually involves a value-judgment, that is, the acceptance of a major premise or assumption concerning the way people should behave in various types of health problems or concerning the ways in which health questions should be interpreted. In developing the Inventory on Health Attitudes an effort was made to minimize the first of these elements.

Because a random selection of health problems in which health attitudes are involved leads to extremely complex problems of analysis and hence to complex descriptions, the health attitudes inventory was developed around a few of the more frequent premises involved in health problems. Thus college students could be described in terms of their acceptance or rejection of a *few common* premises basic in "health courses of action."

What are these more common premises? To answer this question the central staff and science instructors of the cooperating colleges analyzed both the courses of action taken by people in health situations and the opinions expressed by students and adults. In this analysis an effort was made to identify the basic assumptions implied by the course of action or the expressed opinion. These analyses resulted in the formulation of six major premises—sometimes accepted and sometimes rejected—as most frequently involved in decisions concerning action to be taken in health situations. These six premises are indicated by the following statements:

1. That there is *one* right way in health practices or problems.
2. That qualified agencies should have a right to control in health problems.
3. That individuals have a responsibility to fulfill in maintaining at a maximum their own health as well as the health of others.
4. That good, adequate, and buoyant health requires the greatest concern for bodily functions, for dangers from bacteria, etc. [The unqualified acceptance of this assumption by a person would indicate a hypochondriac.]
5. That personal appearance—rugged manly physique—is the most important element of health.

6. That it is nature's purpose to maintain health at a maximum, especially if nature is "uncontaminated" by man's activities.

Information concerning the degree of acceptance of these general premises was obtained by securing the students' reactions to each of 60 statements. The students were asked to respond according to the following directions:

The following statements in the inventory represent opinions about various phases of health. *Since there are no right or wrong answers to the statements, you are to express your own point of view about them.* Indicate how you really feel about each statement immediately after you read it. Do not pause too long on any one of them. Mark the answer sheet as follows:

A — if you *agree* with the whole statement.

U — if you are *uncertain* how you feel about the whole statement.

D — if you *disagree* with the whole statement.

Ten statements were prepared to sample each of the six major premises. Some of these ten statements were written in such a way that the student's acceptance of the statement meant the acceptance of the premise. In the remainder of the ten statements the rejection of the statement meant the acceptance of the premise. For example, the *rejection* of statement 15, "Even in those cases where the use of high heels results in falls and crippled feet, it is that person's own business and no one else's if she wishes to wear high heels," may be taken as an item of evidence that the student accepts the general premise "that individuals have a responsibility to fulfill in maintaining their own health as well as the health of others at a maximum." Similarly, the *acceptance* of statement 56, "Any person should be refused a permit to drive an automobile if he fails to pass a careful physical and driving examination" may be taken as a second item of evidence that the student accepts this general premise.

In taking the inventory, students are not made conscious of the fact that these six general premises are involved in their responses to the 60 individual statements. Some of the students may be conscious of the premises involved, especially if they have given a good deal of consideration to the basis of their actions in various kinds of health problems, but they are few.

The 60 items of this inventory were distributed among the

five major types of health problems as follows: Personal Appearance, Hygiene, Comfort (9 items); Diet, Nutrition, Elimination (13 items); Operation of the Body (14 items); Organic, Physical, and Chemical Health Hazards (13 items); Reproduction and Heredity (11 items). Using this classification it is possible to describe a group's attitudes as "desirable"^a or "undesirable" in problems of: personal appearance, hygiene, comfort; diet, nutrition, elimination; operation of the body; health hazards; and reproduction and heredity. Such a description would supplement the evidence concerning the degree to which the group subscribes to the six premises.

5. Analyzing Health Problems

This inventory was developed to obtain three kinds of information concerning the student's ability to analyze health problems: (1) Can he make reasonable interpretations of health data? (2) Can he appraise the competence and integrity of individuals or organizations involved in health problems? (3) Can he justify various conclusions or courses of action?

An indication of the student's ability to interpret health data was obtained by asking him to judge the extent to which twenty-two interpretations presented in the inventory were or were not justified on the basis of evidence also presented. Some of the interpretations he was asked to judge involved only simple reading of the data, others required judgments concerning the adequacies of the sample of data presented, the extent to which the data could be extended to other subjects, the extent to which certain causes and effects could be inferred on the basis of the data presented.

Evidence of the student's ability to appraise the integrity and competence of groups or individuals was obtained from his reactions to two exercises. In each of these exercises a proposed course of action was presented that implied certain assumptions concerning the competence and integrity of individuals or groups of individuals. After the various elements involved in the proposed course of action were analyzed, the student was asked to make judgments of the validity of a number of specific statements deal-

^a "Desirable" was defined as the acceptance of premises 2 and 3 and the rejection of premises 1, 4, 5, and 6.

ing with the competence and integrity of the person or group involved in the situation.

In the third part of this inventory the student was asked to justify the conclusions stated in connection with four health problems. In making this justification, the student could use or apply valid scientific principles. He also had opportunities to make various kinds of errors. Thus, instead of or together with the use of valid scientific principles the student could select or use reasons involving false analogy, assuming or restating the conclusion which was to be justified, or using true but irrelevant reasons.

In summarizing the responses to this inventory, an attempt was made to describe the various kinds of incorrect thinking used by the students, as well as to provide a score indicating the degree to which the students employed correct analysis. For example, a group of students might be described as "going beyond the data," when judging the validity of interpretations drawn from data, in 60 percent of the total number of opportunities. Such a percentage score represents the ratio of the total number of times the group actually went beyond the data to the total number of opportunities provided in the inventory to go beyond the data.

6. Judging Sources of Information in Health Problems

This inventory was constructed to obtain information concerning the student's skill in appraising the relevance and reliability of sources of health information. It asks the student to appraise each of 39 sources according to the following directions:

In Part I of this inventory seven questions are presented. Several sources of information are listed after each of the questions. You are to judge the usefulness and validity of each source for answering the question. Mark:

- A — if you believe the source is *a good place to go for valid and helpful information on the question.*
- U — if you believe the source may give some information on the question, but it is one that you would not use if there were other sources available.
- D — if you believe the source is a poor one and you would not use it under ordinary circumstances.

A sample exercise will indicate the nature of the inventory:

Question: Is it necessary to pay attention to the amount of vitamins in the diet?

- | | |
|--|-------|
| 1. A book, <i>Vitamin Content of Food</i> , by Daniel and Munsell of the United States Department of Agriculture. | A U D |
| 2. Newspaper column on health problems and their remedy, syndicated and featured in 100 daily newspapers. | A U D |
| 3. A nutrition expert who has done extensive research on the effect of vitamins on rats and other experimental animals. | A U D |
| 4. A pamphlet, <i>Beautify Your Figure</i> , with "new complete calorie analysis chart" by Joe Bonono. This pamphlet contains exercises, measurements, and diet charts emphasizing vitamin requirements. | A U D |
| 5. A textbook on diet which has sold so many copies that the publisher has not thought it necessary or advisable to revise it during the last ten years. | A U D |

The student's responses to this inventory were summarized in terms of "right judgments" about sources of information and in terms of types of sources preferred. The inventory included four major types of sources: individuals, organizations, books, and periodicals. The preference response was indicated by a ratio of the number of times a given type of source, such as an organization, was selected as a good source to the total number of times this type of source of health information could have been selected as a good source.

Student Needs Revealed by the Inventories

Detailed explanations have already been given in the case of certain other inventories regarding their use as a basis for curriculum planning, as a teaching device, and as a means of appraising instructional effectiveness. Since most of the colleges did not use the results of the health inventories as a basis for constructing a course in health education, but rather as one kind of evidence of student needs useful in developing a general course in the sciences, it is necessary to illustrate a bit further the kinds of interpretations made of the health inventories.

After the inventories had been given in a particular college, the staff examined the results in order to see what kinds of health needs were suggested. One type of need was revealed by comparing the desirable and undesirable practices of the student group with their judgments of the validity of the practices on the one hand and their health information on the other. This comparison indicated that in practically all of the types of health problems presented in the inventories the students were following practices more largely by rule than on the basis of understanding of the facts and principles involved. One general need, therefore, appeared to be a greater understanding of how basic scientific principles apply to major health problems.

The inventory results from some colleges justified a second kind of inference. The data indicated that freshmen and seniors made almost identical scores on health information and practices on matters relating to diet, nutrition, and elimination. Furthermore, the freshmen indicated that problems of diet, nutrition, and elimination were among those of greatest interest to them. Thus, in terms of interest and in terms of lack of growth between freshmen and seniors the data suggest the need for giving more attention to problems of diet, nutrition, and elimination.

Another inference can be made from examination of the results from a particular college. In comparing the interest patterns of freshman and senior students, the seniors more than the freshmen indicated an interest in the study in school of problems relating to reproduction and heredity. This suggests that as students in this college go on with their education there is a sharp increase in their desire for more adequate study of problems in this area. Furthermore, the fact that in this college there is an increase from freshman to senior year of the percent of incorrect information about reproduction and heredity provides additional evidence of the need to study such problems in college.

A further inference can be drawn from the shifts between the freshman and senior years in the Inventory on Health Attitudes. Thus, in one college nearly half of the senior group indicated either that they did not believe that they had a personal responsibility to maintain their own health as well as the health of others

or that they were uncertain about their belief. This, too, suggests a possible area for further instruction.

A fifth kind of inference may be drawn from the results of the inventory on sources of information concerning health problems. In several of the colleges there was very little improvement between the freshman and senior year and a majority of seniors were unable to judge the reliability and validity of certain widely used sources of health information. This suggests another need for instruction.

These are but a few of the inferences which might be made from the results of the health inventories. In the case of any particular college the instructional staff generally checked the inferences drawn from the inventory results with inferences obtained from other relevant data. This precaution both increases the likelihood of making valid inferences and also provides additional information of use in identifying student needs.

Some Assumptions Involved in the Use of the Health Inventories

As the work on this major project proceeded several implicit assumptions were brought into the open and explicitly noted. The first of these was that the health inventory results need not be used to develop a course in health as such. Instead they serve best as a basis for determining the emphasis to be given to the personal health objectives in the teaching of biological and physical sciences. As is pointed out elsewhere in this volume, most of the colleges found that courses covering a broader area than that of a single department were more effective and more practicable for purposes of general education than a larger number of courses in specific fields. As a result most of the colleges did not separate the scientific material relating to health to be included in a health course but considered objectives in health appropriate for science courses in general education.

A second assumption was that each college should interpret the inventory results for its students and, in the light of this evidence and the philosophy of the college, formulate its own objectives and standards pertaining to the improvement of health. For exam-

ple, in one college the instructors pointed out that most of its graduates remained in communities where dietary habits were undesirable; hence, the inventory responses indicating undesirable practices and information about diet and nutrition were given more attention than in another college where the graduates generally went into communities in which diet and nutrition practices were more desirable.

A third assumption was that the science curriculum should be developed in terms of scientific principles, the understanding of which would increase the student's ability and disposition to make sound decisions on health problems; that the curriculum should not be developed in terms of specific answers to the specific questions included in the inventories. For example, the results in one college indicated that approximately 70 percent of the students believed that "government inspection stamps on meat indicate that government agents have examined the meat for every possible parasite." Biological science courses should not attempt to teach the correct answer to this problem as a specific fact; instead the courses should attempt to develop those principles of bacteriology the understanding of which would enable the student to make sound judgments concerning the possibility of identifying the presence of all possible organisms in meat.

A fourth assumption was that the interpretation of the results of the health inventories should involve collaboration by several departments and groups—science, home economics, student health, and the like—and that there should be a division of responsibility for instruction designed to meet health needs.

A fifth assumption was, of course, implicit throughout the Study, namely, that any one college or department within a college because of the nature of its resources will attempt to achieve the health objectives in ways appropriate to the best use of its resources and in ways that will be different in many respects from those used by another college to attain the same objectives.

In general, the inventory results indicated more serious student needs in the area of health than had been recognized by the college staffs before the inventories were given. In many cases this resulted in a concerted effort to improve health education within the colleges through the use of various educational resources avail-

able. In most cases it meant that more attention was given in biological sciences to important principles relating to personal and public health than had been ever before.

The second major project in the sciences was to have involved the study of student needs relating to more intelligent and long-range use of natural resources. The science group in the 1941 workshop had outlined the general scope of this investigation, including the preparation of an inventory. Members of the central staff were at work developing the tentative draft of this inventory when the war broke out, and then attention of science teachers and other trained scientists was diverted to the pressing responsibilities placed upon science during the war period. Hence, the completion of this project will await later opportunities for co-operative work.

A third major project in science was also outlined to involve the study of student needs in relation to their scientific orientation in the world and the universe. A function of science in giving a world-picture—or more comprehensively, a scientific conception of the universe—has long been accepted by many science teachers. To see what needed to be done in this connection at the college level required a more accurate indication of the conception of the universe held by students as they entered college. This inventory and study were also in the initial stages at the time that the Pearl Harbor attack diverted scientific effort to purposes of the war.

Major Projects in Student Personnel

STUDENT PERSONNEL OFFICERS in the cooperating colleges were actively concerned with the Cooperative Study from the very beginning. Several factors accounted for this. One of the functions of a student personnel program is to help the student maintain physical and mental health and to obtain the other conditions necessary for effective college work. Any change in educational aim or program is likely to modify the conditions essential for effective work and raise new problems of orientation and morale. For the personnel program to be effective in discharging this function, those in charge must understand clearly the educational program and its implications for student personnel problems.

A second factor of relationship between personnel officers and the program of general education grows out of the opportunity which student personnel officers have to collect important information about students that helps to indicate student needs and student growth and development. Such information can be of considerable value in the planning and appraisal of the program of general education. Again, this implies an understanding of the objectives of general education and of the main outlines of the curriculum program on the part of personnel officers so that they can plan the collection of data in terms of items most likely to be helpful for purposes of curriculum development and appraisal.

Finally, the student personnel program commonly includes types of experiences that can be so organized and utilized that they provide one means for students to attain the objectives of general education. For example, many colleges include in their major objectives the development of skills in participating effectively in group deliberation and group action. There are several possible contributions to this objective that can be made through

courses in the social sciences, the humanities, and the natural sciences, but, in addition, the student personnel programs in most colleges provide opportunities for experiences in group deliberation and action that can make significant contributions to this objective. As another example, many of the colleges include among their objectives the development of understanding of and appreciation for such basic democratic values as the belief in the dignity and worth of every human being, the belief in justice and equality of opportunity, and the like. Many of the activities carried on in the student personnel program can provide opportunities for students to clarify their understanding of these values and to appreciate what they mean in concrete situations. Again, this conception implies that student personnel officers have a clear understanding of the objectives of general education so that they can search for opportunities in the personnel program to provide experiences for students likely to contribute to these objectives.

For these three reasons student personnel officers were included in the intercollege conferences and the planning of individual projects from the time the Study began. As in other fields, the projects were, at first, varied and largely of concern only to the individual colleges. However, as the months went by it became clear that there was one aspect of personnel work so closely involved in the program of general education and of such deep interest in all the colleges that it might properly become a major common project in this field. This aspect was the actual day-by-day living of the student during his college years. Two questions were of common concern: (1) What kinds of problems arise from the students' life in college that need to be dealt with in providing for his general education? (2) How can the experiences of college life provide opportunities for his further educational growth?

First Project: Self-Inventory in Personal-Social Relations¹

The initial step in formulating the project was to hold an intercollege-committee meeting of student personnel officers to prepare

¹The several inventories developed by the Cooperative Study in General Education may be obtained from the Cooperative Test Service of the American Council on Education, 15 Amsterdam Ave., New York 23, N.Y.

an outline and plan. At the first meeting the group considered several possible schemes for analyzing student living. After considerable discussion, the one adopted as a starting point may be outlined as follows:

- A. The areas of human experience, behavior, growth, and development involve needs for:
 - 1. Physical well-being
 - 2. Mental well-being
 - 3. Intellectual development
 - 4. A philosophy of life and religion
 - 5. Aesthetic experience
 - 6. Vocational orientation
 - 7. Effective citizenship
 - 8. Recreational resources
 - 9. Satisfying relations to others, involving
 - a) Personal-social relations, getting along with people in the immediate environment
 - b) All other human relations, including those with communities and cultures remote from the immediate environment
- B. The kinds of data to be obtained in these areas in order (a) to make judgments about the needs of students, or (b) to evaluate the development and progress of students with respect to their needs, may be found in students'
 - 1. Activities
 - 2. Purposes
 - 3. Problems or difficulties they face in achieving their purposes
 - 4. Abilities and skills
 - 5. Information
 - 6. Interests
 - 7. Attitudes and beliefs

With this scheme before them, the members of the intercollege committee selected the area of *personal-social relations*—9 (a) in the above outline—for systematic study. Their reasons for this selection were several: this area was intrinsically important to the student's attainment of maturity; it was of general interest to the colleges; present data on students with respect to this area

were especially inadequate; and recent studies by Prescott, Davis, Warner, Gardner, and others had indicated the tremendous importance to satisfactory adjustment of the individual's intimate, personal relations with others. It was decided to obtain data concerning the activities, concerns, and interests of students which involve personal-social relations (1, 3, and 6 of the outline above).

With these decisions made, the staff prepared two preliminary inventories, designated "Inventory A: Concerns and Difficulties" and "Inventory B: Activities and Interests." These "trial" inventories were administered to a group of students in one college. The results were exhaustively studied by an intercollege committee whose members went through the inventories item by item, eliminating some, adding others, revising many. Categories or groupings of items were suggested so that subscores consisting of responses to related activities, interests, and concerns could be secured. The basic assumptions regarding human behavior that were implicit in the selection of items were questioned, analyzed, clarified. As a result, a revision of the Inventories A and B, administered to several hundred students in many colleges, provided a cooperative project from which emerged, after condensation and further revision, the present Self-Inventory of Personal-Social Relations.

The Construction of the Inventory

The Self-Inventory of Personal-Social Relations is divided into two parts. Part I consists of 100 items describing activities of students in the following personal-social relationships: Family and Home, Faculty, Members of the Opposite Sex, Belonging, Social Skills, Intellectual and Aesthetic Experiences, Activities Involving Leadership and Initiative, and Social Welfare Activities. The student may respond in one of three ways: (1) if he participates in the activity; (2) if he does not participate but is interested in the activity; (3) if he has no interest in or is indifferent to the activity. Part II consists of 100 items describing concerns and difficulties of students in the following areas: Family and Home, Opposite Sex, Faculty, Belonging, Social Skills, Social Experience, Likeness to Others, and Physical Well-Being. Here again, the student may

respond to the item: (1) if it describes a situation of deep concern to him; (2) if it describes a situation about which he is mildly concerned; (3) if it describes a situation which represents no concern or difficulty to him.

A CONCEPT OF SOCIAL ADJUSTMENT

The basic proposition or organizing principle which ties the various categories together might be stated thus: in personal-social relations, students (1) engage in activities in order to (2) achieve certain purposes; in so doing they (3) encounter certain difficulties, to overcome which they (4) draw upon their personal resources of social skill and experience.

Human behavior is rarely, if ever, so simple that it can be easily broken down into the four elements of this basic proposition. *Purposes* are often complex and numerous; sometimes they are not recognized. A student doesn't always know what he really wants, psychologically speaking, when he is prompted by some inner urge to seek the friendship of others. *Difficulties* are encountered but not recognized. A student inexperienced socially who comes from a limited home background does not recognize his inexperience for what it is; instead he withdraws from social life, bewildered and hurt. *Social skill* and *experience* are often lacking when the student needs them to meet a new difficulty: the familiar "freshman" behavior during the first week of the college experience manifests students' inadequate preparation socially for the contingencies of the new environment. More than this, *activities*, as such, may belie the purposes students have in participating in them; for example, a student "goes out" for football, not because he is particularly interested in athletics, needs the exercise, or for any other reason related obviously to the values of the sport, but because being a "letter man" will give him a social status he wants. Thus, we see that the basic psychological process involved in behavior—achieving goals or purposes, meeting and attempting to overcome difficulties—is sound but hedged about with complicating considerations.

The activities (Part I) and difficulties (Part II) in personal-social relations may be seen to occur with major groups or types of people, that is, in the categories of Opposite Sex, Family, and Faculty.

In the Opposite Sex category, the inventory makes the assumption that students in college have goals or purposes involving heterosexual adjustment. These are "must" goals because of the very nature of the organism and demands of our culture. Students not engaging in personal-social relations with the opposite sex—the timid girl, the girl-shy boy—are atypical and manifest in their withdrawal an adjustment which is often inappropriate.

In the Family category, the inventory accepts the concept that students in late adolescence (as well as at other ages) have a strong need for affection, for being loved by one or several persons. Such a person or group of persons is the family or its substitute in relations with other adults. At the same time, the college student must be achieving adulthood, part of which involves achieving independence from the family. To achieve the nice balance between these two apparently opposing purposes occasions much adolescent (and parental) concern. Relations with the family represent a crucial area of personal-social adjustment, for they suggest whether the person is mature and ready to be responsible for himself or whether he is still too dependent on adults. His basic emotional security, his sense of being a self-respecting person, valued for his own sake by others whom he respects, is rooted in his emotional ties to mother and father—or their substitutes.

In the Faculty category the inventory explores the way in which the student reacts to adults who are in his immediate environment but who are not necessarily parent substitutes. Faculty members as individuals or as a group represent in our society a peculiar psychological relation with the student. They represent authority, the authority of wisdom and learning—the authority of adults who supposedly know what the student is manifestly in college to get and who therefore represent those with whom the student must "get along" as a younger adult. Faculty members are neither parents nor peers so far as the student is concerned although they may, in individual cases, be either or somewhere in between. The important reason for including the category of Faculty is to learn: How do students (or a student) react to those in their immediate society who represent authority, the controlling power, the wisdom regarding mores and ideals? Is the student's reaction one

of dependence? hostility? indifference? feeling of equality? appreciation? In these feelings, as manifested by the student's activities and difficulties in this area, we may find clues to the student's basic adjustments in personal-social relations.

BASIC PURPOSES INVOLVED IN ADJUSTMENTS

In the organization of the inventory, activities and difficulties also relate to purposes. The following categories relate to different unifying purposes which tie various kinds of activities and difficulties together, for example, the individual has the purpose of belonging, engages in certain activities to accomplish his purpose, and in so doing encounters difficulties:

Belonging (Activities and Difficulties; i.e., Parts I and II)

Likeness-to-Others (Part II only)

Physical Well-Being (Part II only)

In the Belonging category, the inventory explores the extent to which the student (or the group) appears to be achieving the basic human purpose of being accepted or valued by one or more social groups, whether large or small, organized or informal. The inventory assumes that every person has a psychological need to achieve this sense of belonging, just as certainly as he has a physical need to be clothed and fed.

The activities which accomplish this purpose may involve going to a campus hang-out, going to dances, dating, being invited to house parties, the social affairs of a club or fraternity, and the like. Difficulties encountered in belonging, whatever their cause may be, are reflected in such items as these from the Belonging category of Part II:

101. Being in too few student activities.

129. Spending too much time with one or very few persons.

150. Being uninterested in the kinds of social activities available.

The category Likeness-to-Others stems from the assumption that the individual and especially the adolescent has a need to feel that he is like others in essential and desirable ways, that he is fundamentally a person like other persons. The feeling of being like others or of being unlike others only in ways that are valued or admired by others is easier to define by giving the student a chance to say in what respects, if any, he feels unlike others; hence

in the category Likeness-to-Others in Part II the student responds to such items as:

- 106. Being self-conscious about noticeable physical defects.
- 135. Being embarrassed by family background.
- 173. Feeling that I am too tall or too short.

The responses of particular students indicating a feeling of "unlikeness" may be grounded in fact or in fancy. The student with noticeable physical defects, the Negro in a white community, or the cripple are in fact different in appearance from others. Or the difference from others may be fancied or imagined. This is probably more serious from a mental-health standpoint, for the person who in appearance, mental equipment, background, and in other ways is generally like those about him *but who still feels different* may be involved in serious emotional conflicts about himself. He is having difficulty in respecting himself; he may be immobilized in affectional relations so that he cannot be friendly; he alienates others, a trait which in turn drives him further away from others and reduces his chances of developing acceptable relations with others.

The category of Physical Well-Being can also be considered from the point of view of whether the student's feelings about his health are grounded in fact or fancy. The following items illustrate the category:

- 114. Lack of sleep spoiling my enjoyment of social activities.
- 128. Physical deficiencies keeping me out of sports or other extra-curricular activities.
- 153. Being nervous, "jumpy," or irritable too much of the time.

The inventory serves a purpose for the student with genuine ailments by identifying how he thinks these physical deficiencies affect his social relations. Does poor health make him withdraw socially? Does a physical defect, such as a crippled limb, make him too sensitive to participate fully in social life? The inventory assumes that sound mental health involves coming to grips emotionally with the body one possesses, accepting it for what it is, trying to maintain it in as healthful a condition as possible, and not permitting physical limitations to destroy the basis for sound personal-social adjustments.

USING PERSONAL RESOURCES OF SKILL AND EXPERIENCE

Important to the individual's personal-social adjustments is his ability and skill in doing the things which others in his group do. Particularly is this true with reference to the social activities which are highly valued by the group to which the individual aspires to belong. The extreme value placed upon athletic prowess in some colleges is a good example. Where this obtains, the student who can play football, basketball, and baseball is assured a status, even though in other respects than athletic ability he is not particularly adept. The student, on the other hand, who is inept in athletics finds it difficult to secure a status with his athletically minded friends except by becoming the wag, the water-boy, or the butt of jokes—roles which he may be disinclined to play. Accordingly, such a student may become tense in his personal-social relations, developing a cynicism, a veiled bitterness, or a lone-wolf mode of life which blocks his development. The background of social experience in which these skills have or have not been developed is, therefore, an important consideration in appraising the social adjustment of the individual or the group.

In the inventory, the category Social Skills is represented in Part I by such activities as these:

2. Singing in a glee club, chorus, quartette, or similar musical group.
76. Playing cards, parlor games, billiards, and similar indoor games with fellow students.

The sixteen items of the category sample the major types of social activities involving skills and abilities, such as those used in the school publications, athletic organizations, formal and informal parties, and so on. The assumption is that a student's lack of any, or at best his possession of only a few, of the skills and abilities which others in his group possess constitutes an important factor in his relations with these students.

Whether or not a student finds difficulty in acquiring the social skills he wants is explored in the category Social Skills in Part II; a few items will illustrate the content of this category:

102. Forgetting names or faces.
105. Not knowing how to dance well.

130. Not having the skills or talents to excel in extra-curricular activities.

The assumption here is that the student who checks many such concerns and difficulties, whether or not he possesses social skill, is being strongly influenced in his relations with others by his feeling that he is inadequate, inept, and unskilled.

A second personal resource in meeting difficulties, one which is intimately related to social skills, is the extent and adequacy of the student's social experience. The assumption is that the student who feels inexperienced may be justified in his feeling either because his experience has been too limited or because it has been of the wrong kind. Items from the category Social Experience in Part II sample concerns which involve both extent and adequacy of experience. For example: .

Extent

116. Family making unreasonable restrictions in regard to my social life.
120. Failure of high school to provide adequate experiences in preparation for college social life.

Adequacy

141. Being treated like a child by my parents.
149. Being considered unsophisticated and socially inexperienced.
170. Not having done unusual or interesting things in the past about which I can talk.

TYPES OF SOCIAL EXPERIENCE

There remain three categories of Part I, all of them organized around different types of social experiences that are common on a college campus: Intellectual and Aesthetic Activities; Activities Involving Leadership; and Initiative and Social Welfare Activities. Although in interpreting a pattern of scores for either a group or an individual, the three categories should be studied singly, they have some common denominators which tie them together and make consideration of them as a group a useful approach. Students' participation with others in intellectual and aesthetic activities, in performing work with others that has social welfare implications, and in developing leadership and initiative are usually assumed to be among the goals of education. That is, social activities of these types are encouraged by the college community be-

cause they provide students with experiences that are essential to their development as future leaders and as college-trained citizens.

Intellectual and aesthetic activities.—In this category are included the activities of a social sort which involve music, writing, painting, singing, studying, having intellectual discussions, and the like. The assumption underlying the category is that in the college environment, where the emphasis is presumably intellectual and aesthetic, the opportunities for social participation in activities of this kind are more or less numerous. Consequently, the student who does not utilize these opportunities is for some reason avoiding experiences which should promote his growth. A number of hypotheses suggest themselves in the responses: perhaps he is socially inept; perhaps he is motivated in attending college by purposes which are not in line with those which the college recognizes in its program. In other words, the sheer presence or absence of intellectual and aesthetic activity in a community where these are among the accepted and valued activities is symptomatic of general adjustments to the college situation.

Activities involving leadership and initiative.—The interpreter of an individual's responses in this category might well proceed on the assumption that everyone would like to be a leader, to show initiative in some respect. Thus, a student with complete indifference might be badly frustrated, either by his own incapacity or by the situation on the campus which prevents his expressing himself at all. Somewhat similarly, the student with no activity but with a large number of unfulfilled interests in this category would indicate a milder degree of this same frustration. The difference between the two persons would be that the latter says, in effect, "These are the things I should like to do, but don't do," whereas the former says, "There is nothing I want to do," an attitude which is highly unlikely to be grounded in fact.

Social welfare activities.—In addition to suggesting another area in which the student may participate or desire to participate in personal-social activities, this category is valuable because of the light it may cast on the student's social sensitivity. Often the individual is incapable of adjusting socially because he is too wrapped up in himself; he seems blind to the interests and

welfare of others; he is virtually incapable of showing any warmth and pleasure in being with and working with other people for some common good. On all campuses the opportunities for contributing to the welfare of others are numerous; some of these may be illustrated from the items of this category:

- 23. Participating in social service work through the Scouts, YMCA, etc.
- 44. Serving as a student counselor.
- 69. Being helpful to students who are ill or whose financial means are limited, e.g., doing errands for students in the infirmary, raising money for scholarship or loan funds, sharing books or other belongings, etc.

The student who shows little participation or interest in such activities as these may be one who is socially insensitive provided, of course, that the opportunities for a display of social sensitivity are present.

THE CATEGORIES ARE INTERRELATED

The categories are not to be considered discrete units, each one sampling an element in personal-social adjustment that operates apart from other elements. On the contrary, the categories are as closely interrelated as the factors themselves are in affecting human behavior. For example, the relation may be causative. Consider the factors of belonging and likeness-to-others: an individual with many concerns in both categories, showing that he does not feel that he belongs to whatever group he aspires and that he doesn't feel like others in "essential and desirable ways," may have difficulty belonging because he does not feel himself to be like others. The interpreter and student might then attend first in their discussions to the likeness-to-others factor.

The relation may be one of *dependence*, illustrated by the categories Family and Faculty. The individual presumably should be weaning himself emotionally from the family by the time he is in college, that is, he should still have some activity but should not have large numbers of unfulfilled interests or concerns in the area of family relations. Instead, he should be having social participation with faculty members, more unfulfilled interests, and fewer concerns in relations with faculty. That is, he should be

establishing strong ties with nonfamily adults and with age peers, as indicated in many of the other categories. Thus, the pattern of responses to the Family and Faculty categories should be noted.

Or the factors may be related by having common components. For example, many of the activities in the categories of Part I, such as intellectual and aesthetic, leadership and initiative, and social skills, involve "belonging" and could justifiably be included in the Belonging category. Similarly, some social skills involve leadership and initiative. Recognition of the common elements among the categories is accorded in the 28 items out of the 100 which are cross-classified. The interpreter of responses must be alert to additional evidence of interrelationship.

The Interpretation of the Results of the Inventory

The inventory is scored in terms of the several categories so that the results may be easily used to indicate individual and group needs. The inventory does not directly reveal a need since the term "need" refers to the gap between where the student is and where he ought to be. It does provide evidences of where he is, or where he thinks he is, with reference to selected aspects of personal-social relations: he engages in such-and-such activities; he has these unfulfilled interests; he has these concerns and difficulties. To compare this picture of the student's present status with a conception of where he ought to be requires that the personnel officer and the college have a clear-cut frame of reference in this field. A considerable amount of time was spent by personnel officers and other college-staff members in summer workshops, in working on intercollege committees and on individual campuses in clarifying concepts of human behavior and their relation to the philosophy of the college. The development of a frame of reference enables the interpreter of the results of the inventory to identify needs by recognizing the areas in which the student's present situation is markedly different from the goals sought by the college.

The interpretation of an individual inventory is usually summarized with a statement as to the specific needs indicated from the inventory results. Such statements may be on various levels of specificity. For example, in the case of one student the following

general areas of need were established: (1) improvement in heterosexual adjustment; (2) development of self-confidence; (3) development of genuine friendships with adults; (4) development of ability to be self-analytical. Or needs may be stated in more specific terms, such as the following: (1) development of ability to lead small groups; (2) improvement in casual, informal relations with the opposite sex; (3) development of ability to show friendliness; (4) improvement in the ability to take active part in classwork. When using the results for individual interpretation, it is assumed that three additional steps will be taken: first, that the student, with some assistance from his counselor, will explore the resources in the college environment that can be used to help him meet these needs; second, that after exploration of possible resources definite courses of action will be worked out on lines that promise to provide experiences helpful for the student in meeting these needs; and, finally, that the personnel officer will provide a follow-up to determine whether the courses of action are achieving the results anticipated. The emphasis in exploring resources in the college environment is upon student exploration. Responsibility needs to be placed upon the student rather than the counselor to identify resources likely to meet the student's needs. Of course, the counselor must have a considerable acquaintance with possible resources, but the student must be led to make careful exploration of them.

In determining courses of action, it is important that the student be ready to take the courses of action selected; that is, that the student's level of development should be recognized so that the action begins where the student now is. It is also important that the course of action be specific so that the student can take definite steps and can make clear plans for meeting these needs. Finally, it is necessary that the courses of action be realistic and of intrinsic value.

In the follow-up the student himself should assume a good deal of responsibility for persistent appraisal of his own progress toward his own goals. In addition, the counselor will need to make systematic, periodic check through recurrent interviews, retesting through the use of the inventory or comparable devices, or written reports from the student.

RELATION OF USE OF GROUP RESULTS TO EDUCATIONAL OBJECTIVES

The broad objective of general education to change the behavior of the individual student in desirable ways can be approached in three interrelated ways: (1) by directly changing the student through instruction, counseling, therapy, tutoring, and other means; (2) by indirectly controlling the conditions which affect him; and (3) by changing the college environment. It is with the latter method of affecting the individual's behavior that the use of the inventory group results is principally concerned.

We have asserted in this report the validity of the concept that the individual's behavior is affected by his interaction with his environment. We need to understand not only how the individual reacts to the environment, but also how his behavior may be influenced by the kind of environment with which he interacts.

When the social environment needs improvement because of its adverse effects on the development of a number of students, we may speak of a "group need," that is, a need which is manifested by a sufficiently large proportion of the members of the group. Through the study of group needs in the student body, therefore, we may relate the use of the inventory group results to the educational objective of effecting changes in the behavior of individuals who constitute the student body.

WHO USED INVENTORY GROUP RESULTS?

Various groups of faculty members have studied the inventory results with a number of purposes in mind. These groups sometimes represented committees which were interested in a particular phase of the college program, for example, the committee on extra-class activities, the committee on curriculum revision, or the student personnel council.

In one college an entire department under the leadership of its chairman explored the ways whereby they might improve not only the quality of their teaching but also the adequacy of their curricular offerings. They found the inventory results helpful in identifying group needs which could be met through changes in classroom methods and through appropriate revision of the physiology and hygiene course—a different emphasis in the counseling procedures followed by the individual faculty members.

A number of individuals with differing responsibilities have studied the inventory group results. Such persons as directors of research, psychologists, deans, chairmen of committees, faculty counselors, and residence directors have found the description of personal-social relations of a group of students useful to them in a variety of ways appropriate to their college tasks. In some cases instructors not particularly interested in the inventory itself or in the inventory approach generally have been assigned by the appropriate administrative officials the job of administering and interpreting the inventory. In many instances, despite the autocratic auspices of the task, such individuals have learned much which has markedly affected not only their attitude toward the validity of the inventory approach but also their philosophy of education.

Second Project: The Inventory of Counseling Relations

Although student personnel officers provide many opportunities for educational development of students in group activities, a considerable part of student personnel work is done in the counseling situation. Counseling becomes one of the major means of offering opportunities for educational experiences to the individual student, and it is one of the chief "teaching methods" utilized by personnel officers. It was natural, therefore, that personnel officers from the cooperating colleges would recognize a common concern related to student counseling. As they discussed various problems together, there emerged a common interest in identifying student needs particularly related to counseling, in describing the content and methods commonly employed in counseling, and particularly in evaluating the counseling program in relation to its contributions to general education. The success of the Self-Inventory of Personal-Social Relations suggested the possibility of developing an Inventory of Counseling Relations to serve these common interests.

The members of the committee analyzed counseling activities in terms of five major categories that relate to the content of the counseling interview. These categories are: (1) Developing Social Relations; (2) Developing Life-Goals; (3) Developing Vocational

Orientation; (4) Developing an Understanding of the Body; (5) Developing an Ability to Succeed in College. In each of these categories the committee collected statements which describe experiences that college students may have in individual conversations with faculty members. Twenty statements were obtained to sample each category. For example, "Receiving from a faculty member the record of my test scores together with an explanation of how to read the record" was a statement describing an experience in a counseling situation classified under the category Developing Ability to Succeed in College. As another example, "Getting insights in conversation with a faculty member into what it means practically to be sensitive rather than insensitive to the feelings of others" is a statement of an experience in a counseling situation classified in the category Developing Social Relations.

In addition to the hundred items included under the five categories, fifteen items were obtained that represent five sets of three items each. Each set of items refers to the same idea, problem, or situation, the only difference among the three items of the set being the type of counseling implied by the wording of the item. Thus, as an example, the items in Set I read:

- A. Getting my course grade from a faculty member.
- B. In conversation with a faculty member analyzing the bases of my grade in his course in order to understand how to improve.
- C. Improving my work as a result of a discussion with a teacher about the bases of my grade in his course.

It will be seen that Type A items represent counseling wherein the student receives ideas or information from a faculty member in such a way that the flow of thought is largely from faculty member to student and rarely from student to faculty member. The emphasis in this type is upon an active faculty member and a passive student. Type B items represent counseling wherein the student and faculty member together make an analysis of a problem or situation, where they explore together various alternatives. These items are characterized by two-way communication. Type C items represent counseling wherein the student asserts that he has changed his behavior, attitude, or ideas partly or entirely as a result of the counseling experience. Type C is similar to Type B

in the two-way communication but differs in that a decision was reached or some other change was effected.

To each of the 115 statements in the inventory the student is asked to respond in one of five possible ways, as follows: if he has had the experience, then he is to mark it as very satisfactory, fairly satisfactory, or only slightly satisfactory. If he has not had the experience, he is to indicate either that he would like to have it or would not care to have it. Hence, the inventory provides both a review of counseling experiences and student reactions to them.

Major Purposes of the Inventory

In constructing the inventory, the committee members and staff were guided by several purposes:

1. To describe the effectiveness of counseling relations between student and faculty member. The emphasis upon descriptions as opposed to "rating" grew out of the conviction that a "rating"—saying "this is good," "this is bad," according to "our" standard—would minimize the value of the appraisal. For example, a description of counseling relations says, in effect, "This is how students say they feel about such and such experiences." A college must decide for itself whether such feelings indicate good or bad counseling, what accounts for the feeling, whether the feeling is justified, and so forth. Having seen how students feel as indicated by their responses to the inventory, the college is in a better position to decide whether this is the way the college wants them to feel about counseling experiences. In other words, the approach of *describing* rather than *rating* the counseling service enables the college to examine its personnel work more critically and with greater likelihood of developing ways of improving.

2. To describe counseling relations in terms of how they affect essential areas of living. The reasoning behind this purpose is something like this: (a) Personnel work, together with other parts of the total educational program, is primarily concerned with bringing about changes in student behavior. (b) These changes may be grouped into certain essential areas of living—changes of behavior in social relations, change of behavior with regard to vocational orientation, and the like. (c) Accordingly, the inventory lists experiences which relate specifically to these essential areas

of living where changes (or developments) are desired as a result of counseling.

The value of this approach lies in the inventory's usefulness in any type of institution. Obviously, colleges differ in the specific techniques they use to change student behavior. For example, to provide suitable experience in the area of social relations, College A may use the technique of a freshman camp, whereas College B may rely upon student and student-faculty parties. The purposes of Colleges A and B may be identical, namely, to provide experiences which will enable students to develop socially. An inventory-effort to appraise the effectiveness with which each technique achieved its purpose, however, would need to include items about both freshman camp and a program of social affairs. If only the program of parties was included, College A would suffer by comparison; if only freshman camp were included, College B would be unfairly appraised. Since the number and varieties of techniques are legion, any effort to appraise personnel work by evaluating the effectiveness of each technique used is thus manifestly cumbersome. The inventory, therefore, by concentrating upon how students feel about the experiences which they have in counseling relations, appraises the end-results in changed behavior for which personnel techniques of various sorts are devised.

3. To describe counseling relations in such a way that the inventory scores are usable in working with individuals as well as with groups. The organization of the inventory in terms of essential areas of living provides scores which suggest (a) whether the student's counseling experiences have related to essential aspects of behavior, (b) how the students feel about these experiences, and (c) whether there is need for more close relationship between counseling and the job of living.

The pattern of these responses has many implications for individual counseling. Thus, one student has had extensive and satisfactory experience; another has had equally extensive experience, but he considers it predominantly unsatisfactory. A third student has had little experience but would like to have many experiences. Such differences considered in the light of hypotheses as to their cause afford insights into ways of improving counseling.

Using the Inventory

The inventory has been used both in counseling individuals and in evaluating the counseling program. For both purposes it is necessary to recognize first that a student's response on any item may have more than one interpretation. It may, on the one hand, be taken at face value or it may represent a concealed or confused reaction requiring further analysis. In the second place, in order to make adequate interpretations and particularly to distinguish between responses that may be taken at face value and those that may not, it is necessary to see the relationship among several responses; that is, it is important to look for patterns of responses. The methods of scoring and interpretation have been devised with these two considerations in mind.

In working with individual students, it helps to provide answers to such questions as: What are the attitudes of the student toward faculty members as counselors? What does the student expect from the counseling experience? What counseling experiences has he had? How does he feel about the experiences he has had? What counseling experiences does he want that he has not had? To what degree has he developed an integrated and broad-gauge reaction to his college experiences?

In using the inventory on a group basis for appraising the counseling program, two procedures have been followed by the colleges. In the first, the interpretation is initiated by raising questions about the counseling program, partial answers to which may be found in the inventory responses. In this procedure each of the 115 items of the inventory may be considered a test, a sample of a larger family of possible items. To the extent that a given item tests a particular aspect of the counseling program on a campus the responses of a group of students to that item may be useful test data. For example, one college had for some time attempted to inform counselors about sources of competent, adequate vocational information. Accordingly, the response of students to item 17, "Finding out in conversation with a faculty member how to secure information about various occupations which interest me," was of special interest. An analysis of the inventory results showed that two students out of three had talked about this topic and for

the most part were well satisfied. They noted, too, that of the one-third of the students who had not talked about the topic, the majority would have liked to. The response to this item, considered as a test in itself, tended to inform the college of the extent to which counselors were doing a good job in making sources of occupational information available and the extent to which students were interested in what counselors had agreed needed doing. Thus, an examination of the summary of responses on each item can suggest answers to specific questions about a college program.

The second use of the group results involved studying patterns of responses. Several kinds of patterns are discernible. For example, the five categories provide a pattern. Differences among categories in range and balance of response suggest differences in emphasis and effectiveness in counseling. One college found that students were much more satisfied with their counseling experiences in the category of Developing Life-Goals than they were in Understanding the Body. They noted that students had very few experiences relating to vocational orientation and by far the largest number of experiences were in the category Succeeding in College. An examination of this pattern led the college to conclude that there was some distortion in emphasis that needed attention.

Another pattern of items relates to counseling method. The inventory can be scored in terms of the three types of items mentioned earlier, and it is then possible to note the range of experiences being provided and the students' reaction to them in each of the three types: faculty active-student passive, two-way communication, and change effected. In this connection one college found that the large majority of the counseling experiences provided were of the faculty active-student passive type. Furthermore, a considerable majority of the students indicated greater satisfaction in Type A experiences than in those of Type B and Type C. These results were interpreted by the college as indicating an undesirable condition which led to giving greater attention to developing more Type B and Type C experiences, and helping students to take and to enjoy more responsibility in their own decisions.

These illustrations of patterns of scores represent only two of

a number of possible patterns which can be obtained from the total inventory. It has been found that viewing the results of certain items in relation to others gives a more valid and more useful basis for interpretation.

The first use of the Inventory of Counseling Relations provides a basis for identifying needed improvements in the counseling program. At a later date the inventory may be readministered in order to discover how effective modifications of the program have been. It should also be clear that the inventory provides data not only helpful in planning and evaluating counseling, but also more broadly in relation to other aspects of general education. For example, an indication of needs of students for counseling in relation to an understanding of the body is relevant not only to the content of counseling but also the content of the program in natural sciences. Similarly, data obtained from the inventory regarding counseling experiences relating to general goals of life have implications for the humanities program as well as for counseling. This is just another illustration of the way in which data about students and about conditions in the college need to be understood and utilized by all staff members concerned.

Contributions of the Major Projects to the Study

AS THESE EIGHT major projects were carried through by the various intercollege committees involved, the value of the projects to the colleges began to be evident. Some of the contributions which the projects made were not anticipated when the undertakings were first outlined. It is, of course, true that all of the projects resulted in the construction of inventories that could be used by the colleges to get data from their own students, information of considerable value in curriculum planning, in identifying students in need of special assistance, and in appraising the effectiveness of the educational program. The availability of these instruments was, no doubt, a helpful contribution to the colleges in connection with their work in developing a program of general education.

The greatest contribution of these projects is not represented by the actual inventories themselves, but by the cooperative work involved in their construction, particularly in the planning and the concept structure developed to guide the planning. Difficulties in developing programs of general education are much more commonly those arising from lack of workable and intellectually adequate methods of procedure. In some cases faculty members are limited by their long years of experience with the academic tradition so that they see clearly no other kinds of educational goals, curriculum content, and organization than those which they have been following over the years. In other cases, faculties have recognized the severe limitations of some parts of the academic tradition and have formulated an ideal program not adequately based upon the realities of the students whom they serve or the contemporary society in which they work. These ideal programs have been too ethereal to stand the test of development in concrete

terms. In other cases faculties have been exclusively preoccupied with analyses of society, of students, or with a careful examination of the cultural heritage. Exclusive concern with any of these three elements does not develop a program of general education that properly recognizes the college's responsibility to society, to the student, and to the cultural heritage.

The development of inventories, although at first glance it seems a limited and pedestrian approach, actually requires the consideration of the working relationship of these various elements so important in an effective program of general education. An inventory which seeks to identify needs of students requires an analysis of contemporary society and of relevant subject matter in order to identify the areas and content to be included in such an inventory. The construction of the inventory also demands clarification of educational philosophy and its concrete implications in order to select from these areas and content the items for the inventory which have importance and that represent significant philosophic values. The selection of items also involves a consideration of what is known about the psychology of learning in order to eliminate content and areas not appropriate for a given stage of development of the students or not representing a misconception of learning and human behavior. Finally, the actual use of the inventories brings into focus of consideration the students' own status with respect to these desired objectives. Needs thus identified represent characteristics relevant to contemporary life, possible of treatment in terms of subject disciplines, important in terms of educational and social philosophy, relevant to the stage of development and to the possibilities of learning, and characteristics not now possessed by students in college. The interrelation of these factors became increasingly clear to committee members working on inventories and provided a conceptual framework for viewing the selection of objectives and for guiding the actual task of course construction.

Furthermore, the development of inventories made increasingly clear to those participating the principle that the learning experiences to be provided in an effective program of general education must be related to the objectives of the program. The objectives identified by inventories were sufficiently concrete so that they

made it easier to find relevant learning experiences to use in attaining the objectives.

The making of the inventories also clarified the place and nature of evaluation in the development of an educational program. The inventories were recognized as appraisal instruments but not as devices for grading students. Many faculty members had been preoccupied with assigning grades so that they thought of testing primarily in terms of giving an appropriate reward or punishment to the student in terms of his academic activity. The crying need for appraisal is to identify the respects in which the educational program is effective and the points where it needs improvement. Furthermore, as changes are made in education, evaluation is essential to determine whether the changes have been an improvement. Because the inventories were not tests, because they were to be used, in the first instance, to identify student needs, it was easy for committee members to think of them as a means of later appraisal to determine the effectiveness of a college program and thus to guide the improvement and development of curriculum, methods, and personnel activities. The effect of the inventories upon the faculty conception of curriculum and evaluation and their usefulness in providing a concrete, working procedure were probably the most important contributions they made to the Cooperative Study in General Education.

Another value which ought to be mentioned was the basis the inventory work provided for closer cooperation among the faculty members of a given college and, correspondingly, closer integration among the various parts of the college curriculum and program. The fact that faculty members in several humanities departments worked together upon the humanities inventories and that the same thing took place in the social sciences and the natural sciences provided one basis for greater common understanding, more agreement upon common objectives, and better integration of educational activities within each of these major divisions. In addition, as attention was given to the interpretation of inventory results, faculty members in the humanities began to use data obtained from the student personnel inventories, the social science inventories, and from other college records. This was also true in other fields so that, increasingly, faculty members

from one division got a better understanding of the data available in other divisions, and there was a greater sharing of information and a greater agreement upon educational objectives. Finally, in some of the colleges the data from various inventories, tests, and other sources regarding a freshman class would be analyzed, studied, and interpreted by all of the faculty members working with freshmen and agreement reached as to the way in which each teacher would seek to contribute to the needs of the freshman class as identified by this study. This meant a high degree of common understanding and of integration of program.

It may properly be said, therefore, that the major projects provided the basis for the chief contributions of the Cooperative Study in General Education. Through them there was developed means for studying students, a workable conception of general education to guide the development of the program, and experiences in working together which help to develop greater unity among the staff and integration in college programs.

The Process of Development within the College

IN REPORTING the developments among the cooperating colleges in the preceding chapters, an effort has been made to summarize activities carried on by the several colleges, but not to outline the processes of development of a program of general education within an individual college. The reader may, therefore, have a picture of the various projects undertaken in the Study, but he does not see clearly the pattern of change characteristic of any of the institutions participating in the Study. The purpose of the present chapter is to describe the types of problems and the steps followed within a college so far as they can be typified for the various institutions participating in the Study.

What follows is not an accurate description of any of the cooperating institutions, but it does outline characteristic features found in many of the institutions. It should suggest the kinds of problems encountered in developing a program of general education within a college, some of the approaches that may be used in attacking these problems, and some procedures useful in developing an effective program.

The logical steps involved in developing a program of general education are clear enough. They consist of (1) formulating the objectives to be attained by a program of general education; (2) selecting content and methods, that is, developing types of learning experiences that when participated in by the students are likely to produce attainment of the objectives; (3) organizing these learning experiences so as to make a coherent and effective program; (4) developing procedures for appraising the achievement of students and thus determining how far the curriculum is working; (5) selecting, counseling, and guiding students so that they may derive the most benefit from the educational program; (6)

providing the facilities—both material and personal—that are necessary to carry out the program outlined; and (7) coordinating the various parts of the program so that it functions as a unified and effective whole. There may be some debate about the details of these steps and the possible addition of one or two others, but, in general, these are the chief divisions of the task involved in developing a program of general education within a college.

The difficulty of developing a program does not lie in the failure to identify the job to be done. The difficulties lie primarily in the fact that some of the steps are complex and are not easily executed. The tasks involved cannot be done by one or two people but ultimately must be done by all the faculty who will be concerned with instruction in the field. The program itself cannot be designed with precision in advance, but must be continually appraised and modified to meet the variations commonly found in students, in the students' environment, in conditions within the college, and among the teachers. The pattern of development within a college must, therefore, be one which provides for planning and execution by a large faculty group, one that recognizes the complexity of certain steps involved in developing a program and gives considerable aid to faculty members working on these complex steps, and, finally, one that provides opportunity for experimentation and appraisal in adapting concrete courses and materials to the particular students in the college at any one time.

Development of Faculty Interest in General Education

The planning of a program in general education cannot be carried far until a considerable number of faculty members are interested and concerned with the plans. This interest is necessary for those who will actually participate in the early stages of development. Also, a certain degree of encouragement will be needed by those who will bear the brunt of initial work with the frequent discouragements that come from attacking new problems and recognizing slow progress made in the initial stages. An attack can be begun before great interest is developed among the faculty; but efforts to increase the interest should parallel the initial steps so that, as the work proceeds, more and more support

can be obtained from the faculty as more and more faculty members will need to be involved in it.

In the cooperating colleges two methods were most commonly used in arousing faculty interest in general education. One was to inform the faculty, through meetings, faculty seminars, individual conferences, and suggested readings, of ideas proposed and of the efforts being made by other institutions in attacking the problem of general education. Thus, a faculty seminar might be focused upon a discussion of the program of the Minnesota General College and its purposes, or the proposals of Mr. Hutchins. The experience of the Study showed that this kind of procedure stimulated thinking and discussion on the part of some members of the faculty regarding changes and reasons for changes in college programs. It helped them to approach the consideration of changes in their own programs without thinking them unheard-of departures from accepted academic tradition.

A second method used to arouse faculty interest, frequently in combination with the first, was to make a study of the local situation with a view to identifying weaknesses and strengths and, particularly, to get considerable faculty understanding of the inadequacies of much of the college work in terms of general education. Some colleges made studies of their alumni, seeking to find what they had made of their college educations and also what criticisms and suggestions they had for improvement. Other colleges made surveys of students, seeking to identify problems, needs, and difficulties of this group. Some colleges initiated surveys of the local and broader community to determine more clearly the demands society makes upon the college graduate and the ways in which adults were failing to meet their personal, social, civic, and economic responsibilities. Still other colleges made detailed analyses of their college curriculums and of student programs seeking to learn how adequate was the range of educational experience obtained by the typical student, what sort of continuity and sequence his program really involved, to what extent there was integration or coherence in the pattern of courses he had taken.

The common purpose of these several types of studies was to help faculty members to realize concretely that contemporary

college programs were not adequate and, particularly, were not successful in providing for the general education of the layman. Until a considerable body of the faculty rationally and emotionally accepts the need for improvement in the present college program, when difficulties arise and the laborious steps of change are reached, there will be nostalgic longing for the good old days that never were, and in place of continuing the task undertaken in developing a program of general education, they will prefer to give up the effort and to go along with the curriculum already in operation. By making these studies, by becoming familiar with the ideas and programs of others, the intellectual and emotional bases for stimulating work in improving their own programs will have been laid.

Selecting General Objectives

Although the precise order of steps in developing a program within a college will vary somewhat with local conditions and the particular step which is taken first will also vary, it was quite common for one of the initial steps to be a cooperative formulation on the part of committees or other faculty groups of a definition of general education and a statement of the over-all objectives that the college should seek to attain in a program of general education. The Study found that the definition and the over-all objectives were revised and took on increased definiteness of meaning with subsequent steps of development. Nevertheless, they served the purpose as an initial step in distinguishing between general and vocational education, between education of the layman for the common tasks of life and education of the specialist for his specialized activities. Furthermore, the effort to define general education and to formulate some broad objectives helped in developing a common philosophic conception of the function of the college and of the characteristics of the good man able to lead a good life and to contribute to an increasingly better society.

Identifying More Definite Objectives

Committees of faculty members can spend many hours in refining definitions and statements of objectives. When the broad

outlines have been agreed upon, in place of devoting more attention to refinement, the colleges generally found it more productive to turn to definite studies that would open up more clearly and concretely directions in which the college could move. The preceding chapters have described the types of studies carried on by many of the colleges as their contribution to major projects. Most colleges supplemented these studies with others that would throw more light on the problem of objectives. The making of inventories, it was pointed out, required the faculty member to analyze contemporary society in terms of the field in which he was working, to examine the possible contributions that his field might make to the education of youth, to consider what was more important in terms of his philosophy. Then by applying the inventories to his own students he could get a more accurate picture of student needs. Through the use of the inventories of the Study and through additional investigations planned in the same way to bring into relation information about students, about contemporary society and the possibilities of the cultural heritage and in terms of the values sought by the college, it became possible to identify a series of more definite objectives actually needed by the students and related to the content and materials of the various fields of knowledge.

This kind of analysis is a complex step and caused difficulty in several colleges in getting it carried through adequately and satisfactorily. Several methods were used in getting this step done. Often the initial explorations of this sort were undertaken by a small group of faculty members who had shown particular interest, who seemed to have competence in this type of theoretical and practical work, and who were given some free time to make these studies. A common procedure usually involved providing some kind of additional training for these faculty members so that they might be more skillful in doing the complex job required. Inter-college committees working on inventories provided one such training experience. Summer workshops were also used to give faculty members further competence in this sort of analysis. In some cases, there was already at least one staff member in the college sufficiently skilled in this type of work who gave leadership to other staff members as they participated in the analyses.

Some colleges brought in consultants, such as members of the central staff of the Study, to give guidance in the analyses undertaken, and in several cases an individual faculty member was given a six months' fellowship to go to a university and acquire the necessary knowledge and skill that he might return and give leadership to this sort of work.

It is important after interest has been aroused to see that the directions taken, the goals agreed upon, and the outlines of courses planned are not superficial—so ephemeral that within a short time the faculty members themselves will recognize their flimsy character and their inadequacies both to accomplish the purposes intended and to capitalize satisfactorily upon the resources of intelligence and materials possessed by the college. This means a rather careful analysis of the sort suggested even though it requires training, time, and effort.

That continued faculty support go along with the work on analysis is also important if the resulting program of general education is to be participated in wholeheartedly by the instructors who will carry the work. It is, therefore, necessary to provide not only for the making of the analyses but also for the explanation of them to the faculty and, to some degree, to involve wide faculty participation in supplying data and/or interpreting results obtained from studies of students, and the like.

Selecting Learning Experiences

The preceding step should have established defensible objectives in definite terms. The next step is to consider the means by which such objectives could be attained. The difficulties in this step are those growing out of the unfamiliarity of faculty members with this kind of view of their subject and the limited acquaintance that many have had with learning experiences other than reading, lecturing, and reciting. What is needed is a look at the kinds of educational experiences with which the faculty is familiar and an estimate on psychological grounds and on the basis of some experimental evidence of the kinds of objectives which each of these types of experiences is likely to promote. For example, the reading of a textbook in chemistry is likely to promote recall of chemical facts and principles; the raising of problems in a chemis-

try class is likely to promote the application of certain chemical principles in the solution of these problems. The discussion of the form of a Shakespearian tragedy in an English class is likely to promote an understanding of form and some conception of the way in which different forms have developed. Because in many college classes the range of learning experiences has been limited, this first type of analysis is likely to indicate that a good many experiences now in use seem likely to attain few, if any, of the desired objectives for general education.

The next step is to consider what may be for many faculty members new kinds of learning experiences to see what objectives they might be likely to promote. As an example, one could consider the reading of a report of an important experiment in science with the purpose of answering questions that attempt to clarify the steps in thinking involved in planning and executing the experiment as a learning experience likely to develop insight into the nature of scientific method. Or, a faculty member might use certain texts in the social science course which present some of the great democratic ideals expressed by the founding fathers to be read and compared with reports such as that of Berle and Means that indicate something of the inequality of economic opportunity, in order that the student may understand the values sought by a social system and become able to appraise the system in terms of these values. This systematic consideration of other learning experiences that may be proposed in the literature and by other faculty members extends the range of possible learning experiences that might be used in seeking to attain the objectives of general education.

There is a third approach which was also used in some colleges; namely, taking each objective in turn and suggesting on the basis of known psychological principles the kinds of learning experiences likely to attain such an objective. For example, an objective in the social studies may be to develop increased ability to analyze social problems. From what is known about the psychology of learning, it would seem probable that learning experiences that require students to analyze problems presented to them and that give them a chance to discuss their analyses and to see the kinds of errors they make are likely to be helpful in attaining this ob-

jective. It goes without saying that the learning experiences should indicate not only the kind of behavior involved, that is, analysis, interest, knowledge, appreciation, and the like, but they should also indicate the kind of content with which the behavior will deal. That is, they will be learning experiences in analyzing particular social problems rather than simply analyzing things in general; or, they will be experiences in applying critical standards to particular works of art rather than simply experiences in applying standards in general. This process of exploring and listing kinds of learning experiences for the curriculum of general education will, therefore, suggest leads regarding both content and method.

Organizing Learning Experiences

Because of the background of the staff currently at work in a given college, and because of the several possible ways of organizing these learning experiences, some or one will appeal more than others. The problem here is to form courses and a pattern of courses to make up the curriculum of general education. A course consists of a collection of learning experiences organized in a fashion to make it manageable and reasonably coherent. To be effective, a course should have some discernible scheme of organization within it. Its organization should provide for continuity and sequence in the major objectives and content dealt with, and it should be so related to other courses in the pattern as to make it possible to achieve some kind of unified pattern among the several courses. There are many schemes of organization possible for a given collection of types of learning experiences. Most commonly among the cooperating colleges courses were organized as general courses embodying relevant material from the various departments within a broad field such as the humanities, or the social studies, or the natural sciences, but the organizing ideas within a general course varied widely among the colleges and no data has yet been obtained to indicate clear superiority for certain types of organization.

A general agreement upon the scheme of organization was commonly reached before the task of developing particular courses was assigned to particular individuals. For a committee or a larger

faculty group to make judgments about possible organizing ideas and schemes, they need to be familiar with such criteria of effective organization as continuity, sequence, and integration, and also to know something about various organizing schemes that have been utilized.

It thus seems apparent that the two steps just described—suggesting learning experiences likely to be effective and suggesting a scheme of organizing them into courses—require not only some time for faculty groups to work but also some opportunity to familiarize themselves with different types of learning experiences and their probable educational outcomes, and with criteria and schemes of organization. The methods used among the colleges in developing this familiarity included providing workshop experiences for the faculty members involved, participation in certain intercollege committees concerned with actual course planning, local seminars on the curriculum under the leadership of an outside consultant or someone from the college with adequate background in this field, and, in two cases, provision for six months' fellowships to give special training on the selection and organization of learning experiences to persons who would take some leadership in this work when they returned to their institutions.

Planning Courses

When the general outline of the courses and the types of learning experiences for each had been agreed upon, the next step was generally the assignment of individuals or groups of individuals actually to work out the materials and plan for each course. In smaller institutions a faculty member developing a new course was likely to be relieved of a third to a half of his work for a period of time to get the course materials prepared and the plan well outlined. In larger institutions, it generally proved more productive to provide for cooperative planning of each course by releasing about one-fourth of the time of each member participating. In some cases, faculty members were sent to summer workshops to devote the full time of the workshop to outlining the course and to developing some of the necessary materials. All of the colleges found that time must be allowed to get careful planning done. Courses could not be announced and taught on the basis of gen-

eral ideas without some detailed planning. Particularly was this true when the courses involved somewhat different objectives and different types of learning experiences than those previously in use.

Although staff members differed in their skill and effectiveness in planning courses, it generally appeared to be true that given an agreement upon plan of organization and types of learning experiences faculty members could work out more detailed plans with less need for specialized assistance than they could carry through the preceding steps that have been suggested. Freeing time for them to work, providing workshop opportunities, bringing in consultants from time to time to criticize and make suggestions, providing a wealth of curriculum materials obtained from other institutions and from curriculum bibliographies were the most common procedures used to facilitate this step.

Constructing Evaluation Materials

An essential part of the development of a course or sequence of courses is the building of necessary evaluation materials, tests, examinations, and the like. Evaluation materials are important not only as bases for grading students, but also they are essential as the means for determining to what extent the new courses are effective and where they need further revision and improvement. Properly constructed evaluation materials provide evidence of the degree to which students are attaining each of the important objectives of the course. Hence, they indicate the degree to which the course is effective and at what points and in connection with what objectives the course is less effective than was hoped. Furthermore, the kinds of evaluation used in connection with a given course have considerable influence upon the nature of the preparation made by students. Quite naturally, they tend to study for the things which they think will be appraised. If the evaluation materials do not reflect the objectives that are sought, the attention of students will be distorted and not properly reflect the efforts which it is hoped they will put forth. Hence, an important step in the development of a program of general education is the construction of the necessary means of evaluation.

In most colleges, this was done as part of the preparation of

course materials by the persons planning particular courses. In some of the colleges comprehensive examinations were developed, and the evaluation materials were planned and built cooperatively by various faculty members responsible for various courses. In still other colleges in which comprehensive examinations were being developed, intercollege cooperation was effected so that intercollege committees on examinations were able to effect some economy of effort in building common examination exercises wherever there were similar objectives in several colleges.

The primary difficulties in constructing evaluation materials are those of providing the necessary time and of giving appropriate leadership since there are some difficult and technical problems in making satisfactory tests and examinations. The methods most commonly used for giving leadership were to employ someone trained in techniques of evaluation to serve as consultant to various faculty members in the college, to use summer workshops for training faculty members in examination construction, to send a member of the faculty to a university on a six months' fellowship to develop greater competence in test techniques, to utilize the advice and counsel of members of the central staff in connection with the intercollege committees on examinations, and to send an examination committee from the college to Chicago for a period of intensive work with the central staff in the selection and preparation of test materials.

Interpreting Evaluation Data

As the new courses were tried out and an appraisal made of them by the use of evaluation materials, data were obtained which had to be carefully studied by all those interested in the program of general education within the college. Evaluation data can provide a wealth of interpretative material. As has been suggested, they can be used to identify the objectives that are being satisfactorily attained and those in which little achievement is evident. They can throw light on the types of materials and content that seem to be effective and those that are not understood or well utilized. They can suggest teaching methods that are producing results and others that may not be. Evaluation data can also be

used to give a more accurate picture of the program of individual students, information useful in individual guidance. Furthermore, evaluation data help to clarify the meaning of some of the objectives formulated for the program and, as these meanings are clarified, they may suggest modifications or inadequacies in some of these objectives.

To get so much as this from evaluation materials required an understanding of each evaluation instrument and a good deal of skill in interpreting results from each instrument, and comparing and contrasting results from several tests and examinations. To make the most from evaluation data, therefore, it was necessary in each college to devote some time to interpretation and to provide some plan for training in interpretation. In many cases, members of the central staff spent some time in a college helping individuals, faculty groups, and the faculty as a whole to interpret inventory and test data. These visits served to indicate the possibilities of test interpretation and to give a few leads as to the methods involved. It was usually necessary to supplement this short training by other procedures, such as employing a staff member who had had a good deal of training in interpretation to work as a consultant with various members of the faculty, sending faculty members to workshops where considerable time was spent in interpreting data of this sort, spending time in intercollege committees interpreting the results of particular inventories developed by these committees, and, in a few cases, sending an individual to Chicago for six months of training in evaluation including interpretation. By these procedures it was possible for the colleges to get more and more insight from appraisals that they made.

Actually, of course, the result of an appraisal is to start in motion a second cycle of development. The development of a program of general education—the development of any effective educational program—requires a continuing series of operations which act in recurring cycles. The results of evaluation suggest some modifications in objectives which then must be re-examined. The results of evaluation also indicate necessary revisions in the courses themselves and possibly their plan of organization. This results in a replanning of learning experiences, reorganization of courses, a re-teaching and re-evaluation. By this kind of recurring cyclical pro-

cedure it becomes possible to develop an increasingly effective curriculum and to reach the point where a curriculum of general education is demonstrably effective in achieving its more important ends.

Activities Relating to Student Personnel

In describing the steps involved in curriculum development, mention has not been made of concurrent work on the part of student personnel officers and of the college administration. Persons working in the field of student personnel commonly became involved in the development of a program of general education during the first step when interest was being aroused. They were able to relate many of the personnel problems which they had encountered to inadequacies in the educational program of the college, and, hence, they saw the possibility of a better program of general education resulting in a reduction in problems of student personnel. Furthermore, student personnel officers were commonly able to provide data about students which implied inadequacies in the educational program that needed attention so that, in many cases, student personnel officers were active in studying the current situation and in identifying needs for improvement.

Student personnel officers commonly participated in the formulation of objectives, helping to bring to the attention of other faculty members the kinds of considerations that grew out of informal contacts with students and observations of their problems in personal-social relations. The student personnel officers usually participated also in studies of students that were made to define objectives more clearly. Information available in the student personnel office supplemented inventory results and results from tests, questionnaires, and interviews. In addition, in some of the colleges the student personnel officers were assigned particular responsibility for analyzing the area of personal-social relations and for identifying needs and objectives in this area.

As faculty committees considered possible learning experiences that might be used to attain objectives, student personnel officers were commonly involved because in many cases helpful learning experiences could be provided in the extra-curricular program

and did not need to be restricted to class work. In some cases, this meant a reorientation of the student personnel officers and a new conception of their educational responsibility, but, of course, in many cases throughout the faculty reorientations and new conceptions were being developed.

Where decisions were made to use various kinds of learning experiences under the direction of the student personnel program, it was necessary for some planning to be done here as well as in the curriculum so that the experiences would be most effective, would be well organized and properly conducted. Thus, many of the student personnel officers were planning what would be parallel to courses; that is, they were outlining definite sequences in the field of personal-social relations or in other areas in which they could make a contribution. They, too, were involved in evaluation, both in the special inventories developed for their use and in the data collected from other sources including the whole range of evaluation materials used by the college. Personnel officers also participated in interpretation both of data which they themselves collected and also of other relevant information which threw light upon the effectiveness or relative ineffectiveness of various personnel activities. Thus, the development of a program of general education involved parallel activities on the part of faculty members working with the curriculum and others working in the field of student personnel. In general, the same procedures for assistance and for training were provided for the student personnel officers as were provided for other faculty groups.

Administrative Procedures

This report of the development of a program of general education within a college has largely implied the administrative procedures involved. The administration was responsible for encouraging interest and capitalizing upon interest already expressed. This encouragement of interest did not stop when initial steps were taken, but in most of the colleges was continued throughout the period of the Study by involving a considerable fraction of the faculty in the various activities, by presenting and discussing reports of work going on within the college and within

the Study, by encouraging faculty investigations of problems of interest to various individual faculty members or groups of faculty members, by bringing in outside speakers and consultants, by making it possible for many faculty members to attend and participate in regional conferences, by maintaining a faculty library and giving special announcements to developments in the field of general education, by maintaining a faculty seminar for discussion of educational issues of concern to faculty members, and by devoting a considerable fraction of all faculty meetings to the discussion of educational issues. These procedures were supplemented in many cases by the policy of giving substantial recognition to work done and achievements made in the field of general education. The recognition in some cases involved promotions and salary increases and in other cases involved less tangible evidences of status. In general, however, colleges found that administrative recognition of work on programs of general education provided strong encouragement for interest in this activity.

A second function of administration in such a program was to provide the means essential for carrying it out. In most of the colleges this meant that when new faculty members were employed some consideration would be given to obtaining persons especially competent to work on these problems, that time would be made available for faculty members to work on these problems, that necessary materials would be provided, that consultative service and travel funds for conferences and intercollege committees would also be made available. The program of general education required competent persons, time, and material facilities. The provision of these was a primary administrative task.

Another function of administration in developing a program of general education was to provide for coordination. When a number of people are involved in an enterprise, their various efforts do not automatically produce a coherent and unified effect. Coordination was commonly achieved in the colleges by a unifying idea of general education which was the rationale outlined in the major projects and illustrated to some extent in the foregoing descriptions, and by the two-way communication which resulted from cooperative planning, group planning, and periodic reporting. It was pointed out in the preceding chapter that the major

projects of the Study made one of their greatest contributions in providing means of viewing general education as a set of operations for developing a program of general education that were commonly understood and hence tended to unify the thinking and actions of various people within the college. In addition to that, the conscious effort to include all faculty members involved in the program of general education in various activities of planning, evaluating, and replanning provided further means for coordination.

Another major administrative function in developing a program of general education within a college was that of aiding the growth and further education of the faculty. To develop a new educational program usually required reorientation of purposes, shifts in attitudes, additions to knowledge, and increased skills. These did not develop overnight and it was necessary for the administration in each college to give a good deal of attention to the means whereby faculty growth could be facilitated. The previous reports have outlined the wide variety of methods used in facilitating further education of the faculty. There were included the summer workshops, the intercollege-committee meeting, the local faculty seminar, the opportunity for additional special training at some university, regional or national conferences, provision of consultative service, encouragement of special faculty investigations and guidance on these investigations, provision of supervisory assistance on the college campus or other special technical help, the provision of a professional library where helpful reading materials were available, the provision for interchange of materials with other institutions, and provision of visits to other institutions. This varied repertoire of devices was used in many different ways by different administrators, but most of the colleges found it possible to use such devices in ways new to them and to get marked changes in attitudes and abilities of faculty members which were directly reflected in improvements in the program of general education.

From the standpoint of administration one of the most significant conclusions from the Study was the fact that thorough-going and significant changes in the curriculum and personnel program of the college were made by faculty members most of whom were

not new, most of whom had not been given special training in advance for work on general education. It was possible in most cases for a college to proceed and, by making use of strategic resources at home and those provided by the Study, to develop a program of general education that did represent a substantial contribution to the education of American youth.

Some Conclusions Concerning General Education

THE COOPERATIVE STUDY in General Education was not an isolated incident unrelated to developments among colleges and universities throughout the country. For some years there has been emerging what is now referred to as the general education movement.

Not long after the end of World War I the faculties of several of America's largest universities launched broad courses of instruction intended to give the student a more comprehensive knowledge of the physical world and of the human beings who inhabit it. The first fruit of these efforts was a course in Contemporary Civilization launched in 1919 at Columbia University. As the name implies, this course attempted to introduce the student to the origins of American society and its contemporary characteristics. At about the same time, the faculty of the University of Chicago inaugurated a course entitled "The Nature of the World and of Man," an introduction to the physical and biological world in terms of the needs of the average citizen. These two educational ventures were followed in succeeding years by similar developments in other institutions throughout the United States. They were most commonly survey courses covering the major areas of knowledge. For a number of years, however, these efforts to introduce the student to larger bodies of knowledge related to the activities of everyday life were sporadic, unrelated, and often unpopular even in the parent institution.

Beginning in the middle thirties, however, experimentation of this sort became sufficiently widespread to justify the statement that a general education movement had begun. The present Study, organized in 1938, was a reflection of the interest of American

colleges and universities in general education. Indeed, it is not too much to say that the Cooperative Study in General Education constituted the first systematic and cooperative attack upon the myriad problems connected with the development of this movement.

General education is the most discussed topic of college and university education in America today. The faculties of all vital educational institutions are now concerned with the reorganization and revision of their programs to adapt them more closely to the needs of the general student who now largely makes up the population of the high schools and the colleges. If studies of economic and social trends in America are accurate, the period of intensive general education will probably extend through the fourteenth grade, or approximately to the end of the junior college period. As the studies of the American Youth Commission show, the percentage of students in America requiring specialized vocational training is a very small proportion of those who will continue their formal schooling through the fourteenth grade. Hence, it is apparent that much of the educational program of the high school and the college must be general education. It is clear that educators will be preoccupied with problems incident to the development and improvement of general education programs.

What are the characteristics of this general education movement? A reaction against specialism is the most obvious characteristic. As was pointed out in chapter i, during the latter part of the nineteenth century colleges and universities greatly extended the range of subjects offered and characteristically emphasized specialization. Research and specialization with its accompanying division of labor have made important contributions to production and to the development of vocations and professions, but the nineteenth century trend eliminated the breadth and coherence in the curriculum for the college student. A reaction against this degree of specialization is the first marked characteristic of the general education movement.

A second feature of the general education movement is closely related to the first. Characteristically, colleges working on programs of general education attempt to provide a more adequate integration of subject matter in related fields. Survey courses and

other types of general courses have been developed and commonly characterize the offerings in general education.

The third feature of the general education movement is the increased proportion of subject matter prescribed for all students. Even after the abandonment of the free elective system some thirty years ago, the major-minor plan for the organization of college curriculums left a good deal of choice with the student. Most commonly under this plan the student was expected to select one course from each of the major areas of knowledge. Hence, in the physical sciences he might take chemistry, physics, geology, biology, or mathematics. Under this plan the body of knowledge which the student held in common with his classmates constituted a very small percentage of his entire college course. In many institutions the elective part of the college program constituted as much as 75 or 80 percent of the total. College graduates in America, therefore, have not possessed any considerable common body of knowledge, common set of ideals, or common outlook on life. This miscellany of intellectual background is partly responsible for the inability of our generation to discuss its common problems. To remedy this condition, advocates of general education recommend teaching a common body of ideas, skills, and attitudes which all students who leave our high schools and colleges should possess. Hence, as one examines the new programs of general education now being inaugurated throughout the country, he is impressed with the fact that these new programs include an increasingly large body of common subject matter.

A fourth characteristic of the general education movement is its concern with a wider range of objectives. Proponents of general education do not believe that students should not be taught to think. On the contrary, they affirm their conviction that training in the various methodologies of thought is essential if our people are to come to grips with the perplexing and complex problems of our age. In the prescribed subject matter they would, therefore, give a large place to the cultivation of what Mr. Hutchins would call the "intellectual virtues." The ability to think clearly, logically, and cogently should be one of the prominent intellectual characteristics of those who leave our colleges and universities. But as one educator concerned with the development of general edu-

cation in this country has remarked, intelligence is not enough. As this movement has advanced, there has been an apparent concern among educators about the moral, emotional, and aesthetic development of the individual. In addition to mastering facts, the student must learn to integrate the various activities of his life in a meaningful pattern. He must likewise develop for himself a set of high moral standards to govern his conduct and to provide the means by which he can appraise the behavior of his fellows. The exhibition of selfishness among legislators and other directive groups, to say nothing of the common man, makes it abundantly clear that education has a crucial responsibility in giving moral direction to our youth. Indeed, the situation in the world today is so critical that it is unlikely we can afford to wait until the young people of the nation have received this kind of instruction and have come to occupy positions of control in our society. If we are to survive, the adult education program must provide opportunities for the senior members of society to receive the same kind of instruction and to develop the same kinds of attitudes.

Schools and colleges have traditionally given very little attention to the aesthetic development of the individual. They have looked upon instruction in the fine arts as the responsibility of special conservatories or art schools, and beneath the dignity of the usual high school or college. Though this has been decreasingly true in recent years, the attention given to increasing the aesthetic awareness of young people is distressingly scant. Those interested in general education seek a larger and more prominent place for the fine arts in our educational system. The energy that can be put to productive uses when nations cease their warring with one another will make the average work-week in this country very much shorter than it is at present. A noted physicist has remarked that within a period of twenty years the work-week could conceivably be reduced to one hour with no reduction in our standard of living. This will probably not happen because, rather than reducing the work-week, we will increase our standard of living by using productive energy in satisfying our wants more fully. Nevertheless, it is clear to students of social phenomena that the amount of leisure available to the general public in America

will increase notably in the years ahead. If this additional leisure time is to be put to constructive use, the arts must find a larger place in the curriculums of our high schools and colleges. They will not only permit our people to occupy themselves with interesting and useful activities; they will also serve as a catharsis for the release of the nervous energy excited by our complex and closely integrated social life. It is unnecessary here to develop the conception that students should not only be made aware of aesthetic values but should also be given an opportunity to learn the techniques by which beauty may be created in their own lives.

The fifth characteristic of general education is its concern with the everyday activities of human beings. This constitutes a reaction against the abstract, systematic instruction which, however good it may be as intellectual exercise, often leaves the student with the question on his lips, "So what?" Materials which he is forced to learn often seem far removed from the problems and activities of his everyday life. Those interested in general education advocate the development of instruction which begins with the immediate problems of life for the student who does not intend to pursue the subject into its upper branches. Some efforts have already been made in the various subject-matter fields to bring instruction down to the level of the student's former knowledge, his interests, and his ultimate objectives. This attempt is based on recognized, psychological principles. Instruction is more likely to be effective if it begins with the known and proceeds to the unknown, and also if it begins with the concrete and goes to the abstract.

The members of the Executive Committee of the Cooperative Study in General Education were familiar with these five characteristic features of the general education movement. As the Study got under way, they saw that the developments within the colleges and their cooperative activities provided a considerable degree of concrete experience and of experiment upon which the soundness of the general education movement could be appraised. Since this movement is now involving a large number of the colleges throughout the country any conclusions that can be drawn from the experiences of the Cooperative Study should be made generally available to provide further guidance and suggestions to

colleges and universities now so largely interested in general education. The Executive Committee of the Study believed that it had a responsibility to examine the results of the Study, to draw upon the experiences of members of the committee, and to discuss critical issues and important problems so that by this deliberation some helpful conclusions might be reached. As a result of these deliberations the Executive Committee was able to formulate its position on several important questions involved in the development of a program of general education. These questions were: Who should receive a general education at the college level? What should be the ends of general education? How should the definite objectives be selected? What kinds of courses should be offered for purposes of general education? What content should be included? What teaching methods and materials should be used? How should the students' achievements be appraised and recorded? What characteristics are required of the student personnel and guidance program? How should work in general education be organized and administered? How should instructors be selected and educated?

Answers to the foregoing questions inevitably involved the injection of the educational philosophies of committee members. The views expressed are not, therefore, findings drawn from clear-cut evidence provided by the Study. They represent, rather, pronouncements of members of a committee that had a unique relationship to the Study. Since they were responsible for policy-making, they received full reports of the activities of the Study, they attended most of the meetings of liaison officers, they visited some of the colleges; but since most of them were not actively engaged in the Study, their judgments represent a degree of detachment which could not be had from persons actively involved in the work of the project.

Who Should Receive a General Education?

In tracing the history of the general education movement, it was pointed out that the goal increasingly accepted in America is that all normal youth should have the opportunity of a general education through the fourteenth grade, that is, through the junior college period. The committee endorses this view, but recognizes

that there are two distinct problems involved in providing educational opportunity through the fourteenth grade to all normal American youth. The first of these is the economic problem. Studies made in several states, including Pennsylvania, Ohio, Wisconsin, and Minnesota, show that as many intellectually able students who graduate from high school do not go to college as those that do. These studies also indicate that the economic factor determines, in the largest number of cases, whether or not a student continues work through and beyond high school. The effect of the GI Bill of Rights in providing educational opportunity for large numbers of young men and women has been to bring to the colleges many young people who would not otherwise have planned to go to college, and has suggested the importance of providing more adequately for equalizing educational opportunity and making possible general education in college for all normal American youth.

A second problem involved in accepting this principle of opportunity for all grows out of the fact that in many cases a particular college or university is not prepared to deal with the complete range of abilities, backgrounds, and interests represented in the total population of normal youth. One college, for example, may have developed over the years instructional materials and teachers with "know-how" to deal effectively with those of better than average academic aptitude; another college may have developed increasingly effective work with young people whose interests and abilities are more largely concrete and who measure below the average on tests of abstract academic aptitude. In the case of many institutions a decision must be reached regarding the range of students to be served. This decision should involve consideration of the community needs, the available opportunities for this college, the kinds of students it can muster, and its estimate of the kind of job it can do best. The decision to serve a given range in ability, background, and interest carries with it the responsibility of developing an educational program that is effective with the group selected. There is no justification for professing to serve certain students while at the same time no effort is made to develop or adapt a program for them. It should be emphasized, however, that although the individual college can select the range

of students with which it will deal, society has an obligation to provide a general education for all youth.

What Should Be the Ends of General Education?

In its deliberation regarding the ends to be sought in general education, the committee recognized that the primary obligation of general education is to develop an intelligent, socially sensitive layman able and willing to discharge his responsibilities as a citizen, a community member, a friend, and a member of a family, and equipped with interests and powers to give meaning and satisfaction to life. This means that producing a skilled craftsman or professional man is not the purpose of general education nor is the development of a highly specialized interest, knowledge, or skill. Vocational skill or specialized competence, important as it is, provides no guarantee of civic effectiveness, social responsibility, or personal happiness and worth. Hence, the ends of general education should clearly focus upon the needs of students as laymen.

The committee also finds that a common weakness in college courses is the preoccupation with imparting information to students. Memorizing lectures and textbooks too largely comprises the learning activities of college students and it often represents their conception of the end of a college education. The committee strongly believes that the ends of general education should emphasize understanding, intelligent problem-solving, and clarification of values rather than memorization and habits and skills for which the rationale is not understood.

In selecting ends, the committee recognizes that the limitations of time and resources within the college make it impossible to achieve all of the educational goals that might be desirable and possible if time and resources were unlimited. Developing the ability to analyze significant social problems, acquiring a broad and accurate understanding of the scientific phenomena of contemporary importance, clarifying conflicting personal and social values are illustrations of educational objectives that are significant and that require time and consistent effort to achieve. As new knowledge has developed, as new fields have arisen, as various groups in our society have tried to use the colleges to attain their ends, the tendency has been to increase the content of the college

curriculum and to diffuse its efforts. Much more material has been added than has been deleted. The committee therefore recommends that every college recognize the need for making a careful and rigorous selection of ends that will be given major emphasis. The college in deciding on the range of objectives which it will emphasize will be affected in considerable measure by the experiences of its faculty members and by their educational philosophy. The committee believes that the ends of understanding, of intelligent problem-solving, of clarification of values, and of broadened and deepened interests are of primary importance in general education.

The personal-social relations of students and their physical and emotional reactions enter into their lives as persons while they are in college. In one sense, therefore, physical, emotional, and social development are factors in a college education whether or not they are recognized by college faculty members. The question is whether certain of these aspects of behavior are deemed important enough and so much in need of systematic development that they should become conscious foci of emphasis and therefore be selected as among the major ends of a college education. Each college must decide upon its major ends and include a small enough group to be possible of attainment during the period of college education.

How Should the Definite Objectives Be Selected?

The selection of definite objectives for a program of general education in a particular college can be most helpfully made, in the committee's opinion, by studying the needs of students in that college. The procedure for such a study is outlined in several of the preceding chapters and does not need to be described again here. The previous description should have made clear that this procedure for studying the needs of students does not imply that data about students are all that are needed for selecting definite objectives or that every college will have a distinctly different list of definite objectives. Rather, the procedure outlined for studying the needs of students is primarily a means for bringing into relationship data regarding the contemporary society, objectives growing out of our cultural heritage, data about students and the

learning processes, and the educational philosophy of the institution. These several elements must be considered in relation in order to select definite objectives that are important, that have relevance to contemporary life, that utilize the cultural heritage, that are attainable through educational processes, that are appropriate to the maturity level of students, and that have not already been attained by them.

The committee believes that this process of selecting definite objectives is a necessary one. They find that there are several common weaknesses in colleges which such a procedure would help to overcome. In some colleges no definite objectives have been selected. The content of the curriculum and the methods of instruction have been adopted without explicit consideration of their purposes, and often represent a blind following of earlier practices without effort at rational justification.

In some colleges objectives have been selected without consideration of their relation to contemporary society. In some cases certain of the objectives have no importance in the kind of society in which we now live, and in other cases students would find no opportunity in life outside the college to utilize the knowledge, skills, or interests represented by these objectives. In such cases, a college education contributes little to the present lives of students or the improvement of society, and, as a matter of fact, if there is little opportunity for the student to apply what he has learned in life outside the college, there is little likelihood that such learning is more than a transient development quickly lost because there has been no opportunity for its use.

In failing to find to what degree students have already reached desired characteristics, colleges oftentimes set up objectives which have already been attained by the students, or which are so far above their present stage of maturity that they cannot be attained at the level contemplated. In some of the colleges in the Cooperative Study it was found by the use of inventories that the students in large numbers had already attained certain objectives which had heretofore been set up for college courses while the inventories also revealed that on certain other objectives the students were far below the level necessary to begin the instruction as planned.

Finally, a fairly common phenomenon among colleges is to include in the definite objectives some that are out of harmony with the avowed purpose of the institution. It seems quite clear in these cases that the objectives were not selected in the light of the educational philosophy of the college.

The selection of objectives on the basis of a procedure that involves the needs of students also serves to solve a critical problem in American education, that of the articulation of high school and college. This procedure followed by the college alone does not furnish a final solution for articulation since an effective articulation would involve the common planning of objectives and a common pattern running from elementary school through high school and college; but it does provide for two of the serious aspects of articulation, namely, duplication of some parts of high school work in the college and disjunction where work in college presupposes a background that has not been built in high school. The study of student needs described in the previous chapters identifies present achievement of students and thus provides the information upon which to avoid duplication and to build a program upon the foundation already possessed by the student.

What Kinds of Courses Should Be Offered for General Education?

When the Cooperative Study began, there was wide divergence in practice and opinion among the colleges regarding the values of general courses and departmental courses for purposes of general education. By the end of the Study a large majority of the colleges had come to the conviction that the kinds of objectives to be attained and the types of problems to be dealt with could not be satisfactorily developed simply by the use of departmental courses, but require broader general courses. In this view the committee concurs. The range of problems to be dealt with by an intelligent layman involves some of the content and disciplines of most college and university departments. To set these up as twenty or more short departmental courses not only presents an insuperable problem of continuity and sequence but also fragments the content in such a way that the student has great diffi-

culty in piecing together the bits from the various courses that are involved in dealing with any typical, broad contemporary problem. The committee believes, therefore, that the kind of courses largely needed for purposes of general education are general courses, each of which involves content or discipline from broad fields rather than from a single department. Since any program of general education will necessarily include training in the social studies, in the humanities, and in the field of science, there should be at least one general course in each of these fields.

The committee points out that there are problems yet to be solved in developing the most effective general courses. The earlier ones were largely survey courses which covered a wide range of subject matter at a fairly superficial level attempting to give an over-view of the field. Increasingly, general courses are being organized in terms that give the student some chance to come to grips and to study with some intensity important problems in the area and to gain some skill in utilizing some of the disciplines characteristic of the field. There is still need for developing general courses that provide more adequately for depth and for sequence. Furthermore, some provision seems necessary to guide the student in integrating the subject matters of the several general fields. Some colleges developed a course for this purpose serving as a capstone to the general courses.

The committee recognizes that courses do not comprise all of the means an individual college can use in attaining the objectives of general education. Such additional devices as writing laboratories, speech clinics, the so-called extra-curricular activities, and the like, are essential components of a well-rounded program of general education.

What Content Should Be Included?

It is trite to say that the content of general courses should be that which is likely to help the students in attaining the objectives of general education. Obviously, this is the primary consideration in the selection of content, but the acceptance of this principle does not lead to a single selection of content that represents the only content that can be used in attaining a given objective. Since objectives include understanding, skills in thinking and analysis,

clarification of values, development of interests, and the like, it is quite clear that there are various particular items of content that might be equally useful in attaining such objectives. When faculty members are choosing content, they should have in mind the operational steps by which this content can be so utilized with students as to promote the attainment of the desired objectives. If, in planning, an effort is made to relate content to objectives by outlining an appropriate procedure of teaching and learning, and if a systematic process for evaluating the effectiveness of the content in attaining these objectives is adopted, the committee believes that a satisfactory basis is provided for selecting content for a given program of general education.

What Teaching Methods and Materials Should Be Used?

What has just been said of content is also true of teaching methods and materials. They are selected for trial on the basis of their probable value in contributing to the objectives, and they are retained for future use if their try-out demonstrates that students have made substantial progress toward the objectives of general education. In most cases there are several effective methods and materials that might be used to attain a given objective. The selection in any particular case will involve consideration of previous training of the students in the instructional method (for example, the use of reading materials requires students able to read these materials), availability of the materials and equipment, and the skill and preference of the instructor in the use of these methods and materials. Recognizing that there is a considerable range of choice, the committee nonetheless believes that there are four common weaknesses in the choice of materials and methods among American colleges.

The first is emphasis upon textbook memorization. In many cases students have become so habituated to textbooks and their memorization that they think of college education almost entirely in terms of text materials to be memorized for examination purposes. The committee deplors both the exclusive use of textbooks and the memorization methods which often go along with them. The major objectives of general education are promoted through teaching methods which emphasize analysis, interpretation, prob-

lem-solving, comparison and contrast, observation, testing of hypotheses, the application of criteria of judgment, and the like. A very limited objective of general education is promoted by the memorizing of textbook materials.

A second common weakness is the use on the part of most colleges of too narrow a range of instructional and learning procedures. Potential values for learning are to be found in lectures, readings, discussions, preparation of reports, literary and artistic production, laboratory work, demonstrations, field trips, work experience, participation in the work of community agencies, and the like. The use of more varied learning experiences not only gives variety to the educational program, but it also increases the likelihood of reaching a wider range of students and of achieving certain ends difficult to gain through verbal expression only.

A third common weakness in instructional methods and materials is the failure to provide for the individual differences among students. Students differ in abilities, previous experience, educational achievements, interests, and purposes. An effective program involves provision for such variation among students. Studies of the needs of students will identify many of these individual differences, and the observation and experience of the instructor with his class provide additional data. By planning for a variety of learning experiences that parallel the variations in interests and achievements, it is possible to increase markedly the range of students reached.

A fourth common defect in teaching procedure is the failure to capitalize upon the student's own motivation. Every student is a dynamic organism having potential energy directed by an individual scheme of motivation. Effective education capitalizes upon this potential energy, seeking to use and to modify the motives of the student so that he participates actively in his own education. As the student takes responsibility increasingly for his own education, it also becomes more effective.

How Should Achievement Be Appraised and Recorded?

In considering the means of appraising and recording student achievement, the committee strongly approves the development in the cooperating colleges of basing more of their bookkeeping

upon evidences of actual progress made by students. The committee finds that experiences of many college faculty members with war-training programs and with the placement of veterans have tended to break down the traditional methods of appraising student achievement in terms of instructor grades and recording that achievement in terms of credit hours earned. This system of academic bookkeeping focuses the student's attention upon the collection of course credit bit by bit rather than upon the attainment of certain specific competences. During the period of the Study there was some tendency for colleges to adopt the comprehensive examination plan or similar means for comprehensive appraisal of student achievement in terms of demonstrated competence rather than in terms of course credits. The committee urges the continuance of this trend.

The committee recognizes that the adoption of the comprehensive examination plan and the use of other examination or test devices for appraising student achievement place a reliance upon these tests and examinations that to be justified requires continuous efforts to improve their validity and adequacy. The means of appraisal should be as broad as the objectives of instruction. The program of evaluation must be planned so as to obtain valid evidence about the student's achievement of each of the major goals of the educational program. This involves constructing written examinations and also collecting other sorts of evidence that are relevant to the objectives sought. The adoption of such an examining plan focuses the attention both of student and instructor upon the educational goals and attempts fairly to measure the student's attainment in terms of these goals. This is much to be preferred to the collection of course credits as the evidence of educational achievement; but it should logically lead into the use of the same procedure as a basis for student placement in courses. Students who have already attained the objectives of the first-year course in social studies should not be required to repeat the course merely because they have never been credited with having taken such a course. The committee anticipates the development of comprehensive placement tests and achievement tests to provide the primary bases for appraising and recording educational accomplishment.

What Characteristics Are Required of the Student Personnel and Guidance Program?

Because the individual is the focal point of general education, advising and counseling techniques have an important place in getting information about the students' needs, in seeking to understand, modify, and use his motives so that he actively participates in his own education, in helping him achieve an integration in his educational development, in helping him maintain mental and physical health and good morale that are necessary for his best educational efforts. The committee believes that each college should develop a personnel philosophy to be commonly applied by all members of the faculty in and out of the classroom. The committee recommends that student personnel services, advising, and counseling be viewed as constructive, dynamic activities in a program of general education. The function of student personnel work in a program of general education is to help in orienting the student to understand and want the objectives of general education, to aid him in keeping his resources at a high level and using them effectively in his educational work. Misconceptions of purpose, confusion of plan, personal and social conflicts, emotional upsets, physical inefficiencies, all are blocks to effective educational work. Helping the student eliminate them is an important contribution to the program of general education.

How Should Work in General Education Be Organized and Administered?

As the committee considered the organization and administration of general education, it obtained a good deal of evidence about the problems involved when general education is separately organized and when it is an inseparable part of the departments and divisions of a college. The committee believes that the evidence is fairly clear-cut to support a separate organization for the work in general education. The foci of attention are so different in the case of the specialized department and the broad program of general education that when courses in general education are dependent upon the plans made by department heads, it is difficult for the proper attention and understanding to be given to

general education needs. Furthermore, professors in departments are commonly judged in terms of research production, of specialized competence, and of recognition by specialized professional organizations. These things tend to focus the attention of the department faculty member upon the specialized work of the department and to make it difficult for anyone assigned to work in general education to gain promotion or to give his major attention to work which does not follow the traditional pattern upon which prestige and promotion are based. Therefore, the committee believes that a division of general studies or a general college or some other form of separate organization should be provided for general education. This does not necessarily mean that the division will include only two years. Some colleges have set up a division of general studies which provides for work throughout the four college years. But it does mean that the faculty members while working on programs of general education are under the direction of a division dedicated to the work in general education and organized so as to give recognition to competence shown by faculty members in this field. It does not imply that these faculty members should teach only general courses. Some variety in assignment, including research and advanced teaching, often provides more stimulating conditions for faculty development.

The committee is also agreed that the division of general studies should not be organized by departments, but by larger subject-matter units. In some cases the faculty in general education formed one group unseparated into departments or fields, and in other cases effective organizations were found in which the faculty members were divided into three or four main groups such as the science staff, the social studies staff, the humanities staff. The staff organization should not be in smaller administrative units than is encompassed by the typical general course. There are still many problems of administration and organization of general education, but the committee believes that these two are of primary importance and that the setting-up of a separate division of general studies with faculties organized in large areas provides a sound basis for the continuance of a program of general education.

How Should Instructors Be Selected and Educated?

In the selection and training of staff members for a program of general education, distinction can be made between the process applicable to persons who can be used as faculty members some years hence and those that are now available for teaching responsibilities. Ideally, the instructor of work in general education should be one who has gained for himself a sound and broad general education followed by specialization which has not been so narrow that it excludes the continued examination of the relations between his special field and other fields of study. We may hope that the instructor in general education who begins his work ten years hence will be an able student who did excellent work on a program of general education, whose master's degree represented a divisional rather than narrow departmental training, and whose advanced graduate training was also broadly oriented and included a seminar on the teaching of the field of specialization accompanied by some supervised work involving teaching in a general education course.

The present products of graduate schools are typically not ready to undertake the teaching of general courses. Their training has been inadequate in several respects. They have come up through colleges that were not then offering work in general education so that most of them did not have a good general education, but got a collection of specialized courses unevenly distributed over the fields and dealing with matters largely irrelevant to the problems of the layman.

In the second place, the present products of graduate schools have followed programs of training in the graduate schools highly and narrowly specialized in which it has often been difficult for the student to communicate his work to workers in contiguous fields. For example, the economist and the sociologist have rarely been able to exchange ideas and thoughts because of lack of common ground in vocabulary and conceptual framework.

In the third place, the content and the disciplines to which the graduate student has been exposed are relevant primarily to further and more specialized research and do not provide knowledge or tools by which the layman can deal more intelligently with the phenomena in that field which he encounters.

Thus, the chemist may acquire a highly specialized knowledge of colloids in the laboratory but he does not acquire knowledge that helps him to understand the effect upon resources of material and energy of the construction of dams in the Missouri Valley nor does he acquire techniques by which he may analyze this problem in order to deal with its technological aspects.

In the fourth place, his training in the graduate school has given him little or no experience in communicating with adolescents and young adults, especially those whose training has not been as highly specialized as his. Although 70 percent of the products of the graduate schools go into college teaching, few of them have had opportunities for practice teaching or other opportunities to understand college students and to organize and present materials to them.

Worst of all, a considerable number of products of graduate schools develop an attitude of intolerance toward any activity other than the specialized work in their own fields. This attitude makes it very difficult for some instructors to enter wholeheartedly into the development of a program of general education which seems to them so different from, and hence so inferior to, the activities involved in highly specialized study and research. It is clear that the committee believes that graduate school training should be modified so as to provide a broader base for specialization, some time for relating specialized work to other fields, and some training directed toward the actual problems of college teaching including some supervised practice in college instruction in programs of general education. The Association of American Colleges and the American Association of Junior Colleges have long urged this reform, and it is to be hoped that some of the leading graduate schools will pioneer in the development of effective educational programs for college teachers.

In the meantime, the staff members for courses in general education will be drawn from the existing faculty of the college and from the graduate schools. Because they have not had opportunity for preliminary training, it is necessary to provide for the in-service education of staff members responsible for work in general education. The previous chapters have outlined several significant methods of in-service education used by the colleges and by the staff of the Study. The summer workshop, the intercollege

committee, the faculty seminar, the regional conferences on general education are a few of those described in previous chapters. The committee believes that the methods of in-service education of college staff members developed by the colleges in the Cooperative Study are of distinct value and should be more widely used in colleges throughout the country. In the last analysis, the program of general education rests on the members of the faculty who teach the courses and guide the students. Their understanding of the program and their competence in teaching and in counseling almost wholly condition its degree of effectiveness. Hence, provisions for the education of staff personnel are of primary importance to the success of the whole enterprise. Fortunately, the involvement of faculty in studying the needs of students, in planning and developing courses, in making tests and examinations, and in studying the results provide both for the in-service education of faculty members and for the necessary steps in developing a program of general education. Colleges, therefore, do not need to wait until graduate school programs have been improved. The development of work in general education and the training of the staff go hand in hand. Only thus will effective programs of general education be developed in the years immediately ahead.

Concluding Word

Most of all the Executive Committee has been impressed by the values of cooperation among colleges. The movement of cooperation has proved its worth and should not be allowed to lose momentum. Every college would profit from close cooperation with neighboring institutions, from organization of intercollege committees to work on common problems, from the exchange of personnel records, course syllabi, and printed forms. As regional workshops are established in other sections of the country, new ventures in cooperation should be organized and new studies started.

Long ago Thomas Jefferson addressed a letter to a Pennsylvania college in which he voiced the fraternal greetings of the University of Virginia. "We wish it to prosper," he said, "and become great, and that our only emulation in this honorable race shall be the virtuous one of trying which can do the most good." It will be a happy day when these words describe the friendly good will and cooperative spirit uniting all our American colleges.

APPENDIX

APPENDIX

INDIVIDUAL COLLEGE PROJECTS

THE PROJECTS listed below are those which the individual colleges carried on in cooperation with the staff of the Study to a point that the respective college or individual named is willing to supply inquirers with additional information.

A Program of General Education, Studies of Objectives, Revisions of Faculty Organization, Etc.

"General Education at the College of St. Catherine: Theory, Research and Practice." Three typewritten volumes available through inter-library loan. Volume I: Introduction and History, Theory, Research Devoted to the Whole Program. Volume II: Studies by Individual Faculty Members: Theory, Research, and Practice. Volume III: Original Data, Historical Data, Instruments Used. Sister Annette, College of St. Catherine, St. Paul, Minn.

"Study of Objectives of a Program of General Education." (Manuscript.) Mary R. Harrison, Park College, Parkville, Mo.

Internal administrative reorganization, new or revised curriculums for returning veterans and others, the place of general education and non-degree courses. D. N. Valk, Northwest Missouri State Teachers College, Maryville, Mo.

"General Education in Terms of Citizenship." (Manuscript.) Macalester College, St. Paul, Minn.

How permanent are outcomes of general education? A sophomore-senior comparison. Macalester College, St. Paul, Minn.

"A Project in Educational Analysis and Planning." (Manuscript.) Charles E. Friley, Albert L. Walker, Harold V. Gaskill, Iowa State College, Ames, Iowa.

The formulation of a program of general education in the liberal arts, church-related colleges designed especially to produce a Christian philosophy of life. Robert F. Davidson, Hiram College, Hiram, Ohio.

The revision of general education program in the light of the general objectives of the college. Setting up a core curriculum in general education for the first two years consisting of the following general (not survey) courses: physical sciences, humanities, social sciences, biologi-

cal sciences, Christian philosophy of life. James H. Hewlett, Centre College of Kentucky, Danville, Ky.

"Report of the Indiana Committee on General Education with Suggestions for a General Education Program for Teachers." Ralph Noyer, Ball State Teachers College, Muncie, Ind.

Investigation of the difference in preparation in general education at the beginning of the freshman year. Ralph Noyer, Ball State Teachers College, Muncie, Ind.

Setting up objectives of the college to meet the needs of our students. Centre College of Kentucky, Danville, Ky.

Revision of lower division requirements permitting a better individualizing of the educational program. E. J. Allen, University of Denver, Denver, Colo.

General Planning Board of Faculty Organized into Six Round Tables: Objectives of the College; Student Personnel Program; Improvement of the Curriculum; Evaluation; Community Relations; Student Needs. University of Louisville, Louisville, Ky.

The Role of the Liberal Arts College in National Defense and in the Future. Conference report. University of Louisville, Louisville, Ky.

Department of Cooperative Education in the College. To integrate work experience into the academic program of the college, including part-time placement, cooperative work-study plans, alumni placement. University of Louisville, Louisville, Ky.

The problem of formulating institutional objectives. Macalester College, St. Paul, Minn.

Squaring departmental objectives with institutional objectives. Macalester College, St. Paul, Minn.

The Evening College: A Project in Adult Education. Macalester College, St. Paul, Minn.

Objectives of postwar education, immediate and long-range. H. T. Phillips, Northwest Missouri State Teachers College, Maryville, Mo.

New techniques of instruction, suggestions from procedures of Army and Navy schools. Chloe Millikan, Northwest Missouri State Teachers College, Maryville, Mo.

A study of the industrial plan of the college. Giles Theilman, Park College, Parkville, Mo.

A comprehensive study of the program of the lower division: a plan for the introduction of survey or divisional courses in natural sciences, social sciences, and the humanities. Park College, Parkville, Mo.

The administration of a college program. W. F. Sanders, Park College, Parkville, Mo.

The Development of a Statement of Objectives for the College and the Contributions of the Various Courses to the Realization of Those Objectives. Talladega College, Talladega, Ala.

Toward a Definition of General Education. The Research Program in General Education. Studying the "Intangibles" of General Education. College of St. Catherine, St. Paul, Minn.

The general education program at Fisk University and the inventories of the Cooperative Study: life-goals, religious concepts, postwar reconstruction, personal-social relationships, and counseling relations. Harold F. Smith, Fisk University, Nashville, Tenn.

The design of an interdepartmental project to train leaders in rural life and education in the South. George N. Redd, Fisk University, Nashville, Tenn.

Investigation of field service and work experience possibilities for students in a liberal arts college. George N. Redd, Fisk University, Nashville, Tenn.

Study of departmental and institutional objectives. Muskingum College, New Concord, Ohio.

Program of integrated general education for freshman and sophomore years. Relating and unifying the integrated general education program and the specialized study of the junior and senior years. Muskingum College, New Concord, Ohio.

Individualized programs of study for freshman and sophomore students. Muskingum College, New Concord, Ohio.

Humanities

General Humanities Courses

Student opinion of sophomore survey course in the humanities. J. J. Oppenheimer, University of Louisville, Louisville, Ky.

Syllabus for sophomore survey course in humanities. C. F. Virtue, University of Louisville, Louisville, Ky.

Improvements of evaluation in humanities. C. F. Virtue, University of Louisville, Louisville, Ky.

Study of General Life-Goals of Students. C. F. Virtue, University of Louisville, Louisville, Ky.

Inventory in the humanities, as related to recreational reading, radio, movies, etc. University of Louisville, Louisville, Ky.

The humanities in general education. University of Louisville, Louisville, Ky.

A proposed outline for an integrated course in humanities. Harry G. Dildine, Northwest Missouri State Teachers College, Maryville, Mo.

A survey course in the humanities. Charles L. Griffith, Park College, Parkville, Mo.

Humanities survey course: problems approach instead of culture-epoch approach. Helen M. Stone, Pasadena Junior College, Pasadena, Calif.

Contents of a first-year general course adapted to the needs of the Talladega student in humanities. Talladega College, Talladega, Ala.

Development of one section of a second-year course in humanities. Talladega College, Talladega, Ala.

Introduction to the humanities. Sister Mona, College of St. Catherine, St. Paul, Minn.

Tests in humanities involving the concepts contained in one semester's work in a general humanities course. Louise Dudley, Stephens College, Columbia, Mo.

Application of principles in the humanities: tests involving application of principles learned as opposed to mere knowledge. Edward Megroth, Stephens College, Columbia, Mo.

War and postwar problems of general education: new illustrations for humanities course in line with present problems. Marjorie Carpenter, Stephens College, Columbia, Mo.

Literature in General Education

Objectives of teaching literature, especially world literature. Paul Royalty, Ball State Teachers College, Muncie, Ind.

Introductory course in American literature. Fred W. Lorch, Iowa State College, Ames, Iowa.

Modern fiction: objectives and evaluation. A. L. Walker, Iowa State College, Ames, Iowa.

An experimental test in Shakespeare. Pearl Hogrefe, Iowa State College, Ames, Iowa.

Investigation regarding the reading and study of literature. A. L. Walker, Iowa State College, Ames, Iowa.

Characters in teaching literature. Pearl Hogrefe, Iowa State College, Ames, Iowa.

Shakespeare tests to emphasize character as well as poetic drama. Pearl Hogrefe, Iowa State College, Ames, Iowa.

Examination in literature. Ernest Hassold, University of Louisville, Louisville, Ky.

Inventory on the appreciation of poetry. H. C. Webster, University of Louisville, Louisville, Ky.

English tests. Michigan State College, East Lansing, Mich.

Contemporary Readings. Abigail Quigley, College of St. Catherine, St. Paul, Minn.

Catholic Literary Revival. Agnes Keenan, College of St. Catherine, St. Paul, Minn.

Integrated course in the appreciation of literature, music, and art. Muskingum College, New Concord, Ohio.

A test of literary acquaintance. Zay Rusk Sullens, Stephens College, Columbia, Mo.

Art and Music in General Education

Evaluation of appreciation in the arts. Kenneth Brown, Ball State Teachers College, Muncie, Ind.

Evaluation in the fine arts, particularly measurement of tastes and preferences. University of Denver, Denver, Colo.

Music literature. Francis Proctor, Hiram College, Hiram, Ohio.

Student opinion of the sophomore survey course in art and of other courses in art. Justus Bier, University of Louisville, Louisville, Ky.

Examinations in music appreciation. Gerhart Herz, University of Louisville, Louisville, Ky.

Examination in art appreciation. Justus Bier, University of Louisville, Louisville, Ky.

Evaluation of theoretical and practical music courses. Charles L. Griffith, Park College, Parkville, Mo.

Evaluation of attitudes in art. Y. C. Howell, Pasadena Junior College, Pasadena, Calif.

Student participation in art activities in a humanities course. Frances S. Howell, Pasadena Junior College, Pasadena, Calif.

Introduction to the arts. Julius A. Miller, Allegheny College, Meadville, Pa.

Hurdles in Elementary Harmony. Ruth GoodSmith, Stephens College, Columbia, Mo.

Written Expression in General Education

An evaluation of student achievement in English composition. Elizabeth M. Campbell, Park College, Parkville, Mo.

"Orientation English: A Manual for the Writing Laboratory." (Manuscript.) Elizabeth M. Campbell, Park College, Parkville, Mo.

The conference method in freshman English. Macalester College, St. Paul, Minn.

Individualization of freshman English in a writing laboratory. Macalester College, St. Paul, Minn.

Report on analysis of papers written in freshman English. Mary E. Burton, University of Louisville, Louisville, Ky.

Use of local history as material in English composition. Elva Lyon, University of Louisville, Louisville, Ky.

Coordinated course in written and spoken English. Little Rock Junior College, Little Rock, Ark.

Freshman English: objectives and evaluation. A. L. Walker, Iowa State College, Ames, Iowa.

Propaganda analysis, reasoning and writing: objectives and methods. A. L. Walker, Iowa State College, Ames, Iowa.

Development of a program in writing, speaking, reading, and listening, especially for the Talladega freshman. Talladega College, Talladega, Ala.

Creative writing. Sister Maris Stella, College of St. Catherine, St. Paul, Minn.

Self-exploration in creative writing. Pearl Hogrefe, Iowa State College, Ames, Iowa.

A plan for the use of oral English. A. L. Walker, Iowa State College, Ames, Iowa.

Integration of English and speech in a freshman course. A. L. Walker, Iowa State College, Ames, Iowa.

Evaluation of student writing exclusive of mechanics. Pearl Hogrefe, Iowa State College, Ames, Iowa.

Remedial English course. Mary Louise Vincent, Hiram College, Hiram, Ohio.

Integrated course in English expression. L. J. Davidson, Ethel K. Schuman and Elwood Murray, University of Denver, Denver, Colo.

Construction of a scale for judging written composition. Charles Van Cleve, Ball State Teachers College, Muncie, Ind.

Writing clinic. Duncan Mallam, Iowa State College, Ames, Iowa.

Evaluation of general project of a writing workshop. Malvene Draheim, Stephens College, Columbia, Mo.

Evaluation of written communication: study of criteria for the content of the freshman English course. Wesley Wiksell, Stephens College, Columbia, Mo.

Reading and Speech in General Education

Remedial reading. Marjorie LaCasse, College of St. Catherine, St. Paul, Minn.

Study of speech limitations. Charles Van Cleve and Gordon Peterson, Ball State Teachers College, Muncie, Ind.

How to teach reading to college students. A. Beatrice Young, University of Denver, Denver, Colo.

Remedial speech—speech clinic. Edwin Lombard, Hiram College, Hiram, Ohio.

Remedial reading and construction of tests for measuring comprehension of reading. Mary Louise Vincent and Constance McCullough, Hiram College, Hiram, Ohio.

Innovations in speech instruction. Macalester College, St. Paul, Minn.

Reading clinic. Michigan State College, East Lansing, Mich.

Communication course. Muskingum College, New Concord, Ohio.

Testing of reading skills: two forms of survey test of reading skills. Hugh McCammon, Stephens College, Columbia, Mo.

Evaluating course content in fundamentals of speech. Wesley Wiksell, Stephens College, Columbia, Mo.

Evaluation of students' achievement in mechanics of English composition resulting from shorthand transcription as a basis for the development of a course. Orrel E. Little, Stephens College, Columbia, Mo.

Developing a cooperative plan for individualizing instruction in communication. Wesley Wiksell, Stephens College, Columbia, Mo.

The cooperative plan for individualizing instruction in communication. Russel H. Fowler, Stephens College, Columbia, Mo.

Philosophy and Religion in General Education

A senior course in the philosophy of living. H. T. Lavelly, Allegheny College, Meadville, Pa.

The place of a philosophy of life in the equipment of the college student. Florence B. Smith, Ball State Teachers College, Muncie, Ind.

A course in philosophy and living. R. F. Davidson, Hiram College, Hiram, Ohio.

A check list of some underlying assumptions and principles of an educational philosophy. Harold E. Davis, Hiram College, Hiram, Ohio.

Development of a course in the philosophy of life. C. F. Virtue, University of Louisville, Louisville, Ky.

Development of courses to assist students in achieving a satisfactory philosophy of life. C. W. Cannom, Park College, Parkville, Mo.

A revised attitude test and information inventory in the field of religion. I. R. Beiler, Allegheny College, Meadville, Pa.

The role of religion in higher education. "An Inventory of Religious Beliefs." Macalester College, St. Paul, Minn.

Functional integration of psychology, philosophy, and religion. Muskingum College, New Concord, Ohio.

Evaluation of vespers. Paul Weaver, Stephens College, Columbia, Mo.

Foreign Languages in General Education

Language testing project. Armen Kalfayan, Allegheny College, Meadville, Pa.

German handbook. Alfred P. Kehlenbeck, Iowa State College, Ames, Iowa.

Foreign language proficiency test. J. R. Broderius and H. H. Millott, University of Louisville, Louisville, Ky.

Accelerated courses in French and Spanish. Macalester College, St. Paul, Minn.

Campus conversational vocabulary in German. Macalester College, St. Paul, Minn.

Series of tests for first-year French. Miriam E. Wilson, Park College, Parkville, Mo.

Third-year language at the Pasadena Junior College. Pasadena Junior College, Pasadena, Calif.

Content and procedures for a foreign language course. Fanny Varnum, Pasadena Junior College, Pasadena, Calif.

Beginning modern language courses, including study of civilization of the people whose language is being studied. Muskingum College, New Concord, Ohio.

The Library in General Education

Administration of the college library in relation to the program of general education. Anna B. Pomeroy, Allegheny College, Meadville, Pa.

Faculty motivation of student use of the library at freshman or sophomore level. Talladega College, Talladega, Ala.

Construction of a general information test on library skills. Grace Brandt, Ball State Teachers College, Muncie, Ind.

Library science requirement articulated and coordinated with the required English composition. Ball State Teachers College, Muncie, Ind.

Relation of the use of the library to instruction. Robert W. Orr, Iowa State College, Ames, Iowa.

Library usage test: library survey. Eleanor Homer, Pasadena Junior College, Pasadena, Calif.

Instruction in library skills. David Jolly and Wesley Wiksell, Stephens College, Columbia, Mo.

Social Studies

Curriculum Materials for Introductory Courses in the Social Studies

Introductory social studies course: problems, origin, and values of a democratic society. Harold E. Davis, Hiram College, Hiram, Ohio.

Objectives and content for introductory sequence: history of western civilization. C. H. Matterson, Iowa State College, Ames, Iowa.

Syllabus for social science survey for freshmen. F. O. Wilcox, University of Louisville, Louisville, Ky.

The social sciences in general education. Macalester College, St. Paul, Minn.

Social science survey. Edna Fluegel, College of St. Catherine, St. Paul, Minn.

Contents of a first-year general course adapted to the needs of the Talladega student in the social sciences. Talladega College, Talladega, Ala.

Social studies for the freshman student. Muskingum College, New Concord, Ohio.

Curriculum Materials for Other Courses in the Social Studies

Comprehensive course: our cultural heritage. E. J. Allen, University of Denver, Denver, Colo.

Principles of economics: objectives and evaluation techniques. Division of Science, Iowa State College, Ames, Iowa.

History and general education. Harold E. Davis, Hiram College, Hiram, Ohio.

The background of the war. Library staff, Iowa State College, Ames, Iowa.

Contributions of the Study of History. C. H. Matterson, Iowa State College, Ames, Iowa.

History and general education. Eldon Burke, Ball State Teachers College, Muncie, Ind.

Measuring social attitudes: test to measure attitudes on social problems. Thomas K. Hitch and John Decker, Stephens College, Columbia, Mo.

Criteria for selection and organization of materials for marriage course. Henry Bowman, Stephens College, Columbia, Mo.

Social problems: skills of observation. John Crighton, Stephens College, Columbia, Mo.

Student Needs and the Social Studies

Study of needs of students in agricultural and industrial history. C. H. Matterson, Iowa State College, Ames, Iowa.

Sociological autobiographies collected from students in sociology. Robert I. Kutak, University of Louisville, Louisville, Ky.

Student interest and attitude questionnaire for social science survey course for freshmen. F. O. Wilcox, University of Louisville, Louisville, Ky.

Student reactions (history). Wm. C. Mallalieu, University of Louisville, Louisville, Ky.

How to study the social sciences. F. O. Wilcox, University of Louisville, Louisville, Ky.

Student beliefs about postwar problems. C. R. Hoffer, Michigan State College, East Lansing, Mich.

Evaluation or Testing Devices in the Social Studies

Construction of a comprehensive test in the field of world history or human civilization. Eldon Burke, Ball State Teachers College, Muncie, Ind.

Evaluation in introductory sequence (history). C. H. Matterson, Iowa State College, Ames, Iowa.

Tests and examinations for social science survey course for freshmen. F. O. Wilcox, University of Louisville, Louisville, Ky.

Improvements in examinations for history of civilization. University of Louisville, Louisville, Ky.

Biological and Physical Sciences

Curriculum Materials for Introductory Courses in Science

General course in physics. G. E. Owen, Antioch College, Yellow Springs, Ohio.

General science needs of students. Roy Maxwell, Ball State Teachers College, Muncie, Ind.

Comprehensive courses: our physical heritage, our biological heritage. E. J. Allen, University of Denver, Denver, Colo.

Use of health inventories in freshman science courses. Little Rock Junior College, Little Rock, Ark.

Astronomy unit of physical science survey course. Little Rock Junior College, Little Rock, Ark.

Student interests in biology and botany. P. A. Davies, University of Louisville, Louisville, Ky.

Improvements in freshman course in the survey of the natural sciences. University of Louisville, Louisville, Ky.

Laboratory manual in general chemistry. G. L. Corley, University of Louisville, Louisville, Ky.

Course in general botany with emphasis on serviceability for the average citizen. Harlow Bishop, University of Louisville, Louisville, Ky.

The natural sciences in general education. Macalester College, St. Paul, Minn.

Modifying the biological sciences courses on the basis of inventory evidence. K. W. Simmons, Northwest Missouri State Teachers College, Maryville, Mo.

The biology unit in a natural science survey course. L. R. Setty, Park College, Parkville, Mo.

Problem of survey courses in science with emphasis on physical science. R. A. Rogers, Park College, Parkville, Mo.

The physical science program at Pasadena Junior College. B. W. Howard and S. D. Horning, Pasadena Junior College, Pasadena, Calif.

Contents of a first-year general course adapted to the needs of the

Talladega student in natural sciences. Talladega College, Talladega, Ala.

Development of a second-year course in the biological sciences and instruments for evaluating student growth as a result of the course. Talladega College, Talladega, Ala.

Science and mathematics for general education. Muskingum College, New Concord, Ohio.

Curriculum Materials for Other Courses in Science

Adjustment to human living (course offered by biology department). Allegheny College, Meadville, Pa.

Determination of needs of college students who are preparing to teach secondary school science. John R. Smithson, Ball State Teachers College, Muncie, Ind.

Method of instruction in physical science. G. L. Corley, University of Louisville, Louisville, Ky.

Biology course in college. William M. Bright, University of Louisville, Louisville, Ky.

Development of a second-year course in the biological sciences and instruments for evaluating student growth as a result of the course. Talladega College, Talladega, Ala.

Evaluation or Testing Devices in Science

The reaction timer in science courses. S. D. Horning, Pasadena Junior College, Pasadena, Calif.

Soils test. Michigan State College, East Lansing, Mich.

Evaluating achievement of biological science objectives. P. A. Davies, University of Louisville, Louisville, Ky.

Test items in biology for the science survey course. P. A. Davies, University of Louisville, Louisville, Ky.

Senior examination in biology. Jesse J. Turner, Hiram College, Hiram, Ohio.

An interest test in botany. Minnie May Johnson, Stephens College, Columbia, Mo.

Mathematics in General Education

Introduction to mathematics at the college level. Macalester College, St. Paul, Minn.

Mathematics: grades one through fourteen. Pasadena Junior College, Pasadena, Calif.

Organization of beginning college course in mathematics for large classes of students, diverse both in preparation and in their attitudes toward mathematics. Clarence E. Van Horn, Fisk University, Nashville, Tenn.

Physical Education in General Education

Expansion of the testing program in physical education and its relation to the entire curriculum. H. P. Way, Allegheny College, Meadville, Pa.

Survey of informational needs in regard to health and physical education. A. T. Wood and Robert McCormick, Ball State Teachers College, Muncie, Ind.

Physical education. Granville B. Johnson, University of Denver, Denver, Colo.

"An Intramural Plan of Athletics." (Manuscript.) Leon A. Robbins, Park College, Parkville, Mo.

Dividing responsibilities for health instruction. P. A. Davies, University of Louisville, Louisville, Ky.

Developing a health program. Emma Bee Mundy, Pasadena Junior College, Pasadena, Calif.

Student health education: under direction of faculty committee on health headed by college physician. Muskingum College, New Concord, Ohio.

Home Economics in General Education

Contributions of a liberal arts college to preparation for home-making. Essie White Cohn, University of Denver, Denver, Colo.

Marriage and the modern home. Little Rock Junior College, Little Rock, Ark.

Curriculum revision in home economics. Leita Davy, University of Louisville, Louisville, Ky.

Home economics college curriculum and teaching plans for specific courses in foods and clothing. Marjorie Jenkins, University of Louisville, Louisville, Ky.

Project in practical arts for general education. June Cozine, Northwest Missouri State Teachers College, Maryville, Mo.

Student Personnel and Counseling

Selection and Orientation of New Students

The nature and use of admission data. C. Harold McCully, University of Denver, Denver, Colo.

Revision of entrance requirements. Laurence D. Underwood, Hiram College, Hiram, Ohio.

Selective testing of applicants for admission. Kathern E. Montgomery, University of Louisville, Louisville, Ky.

Selection of students. Macalester College, St. Paul, Minn.

Selection of teachers: construction of more adequate screening device. Ralph Noyer, Ball State Teachers College, Muncie, Ind.

Coordination of freshman advising in the freshman dormitories to the college advising program. Philip M. Benjamin, Allegheny College, Meadville, Pa.

Time study of freshmen. Mary E. Burton, University of Louisville, Louisville, Ky.

Using upper-class students in the freshman orientation program. Macalester College, St. Paul, Minn.

The freshman camp as an orientation device. Macalester College, St. Paul, Minn.

An inventory for the evaluation of freshman orientation. Macalester College, St. Paul, Minn.

Orientation office in charge of testing and counseling program. Paul L. Dressel, Michigan State College, East Lansing, Mich.

Cooperative planning in admissions and counseling by student-faculty committee. Muskingum College, New Concord, Ohio.

Problems of Counseling in College

Allegheny Educational Guidance Clinic. Allegheny College, Meadville, Pa.

A counseling and guidance program. Centre College of Kentucky, Danville, Ky.

Improvement of faculty counseling services. C. Harold McCully, University of Denver, Denver, Colo.

"Vocational Guidance for Women." (Manuscript.) Adah Peirce, Hiram College, Hiram, Ohio.

Faculty freshman advisory program. Adah Peirce, Hiram College, Hiram, Ohio.

An all-faculty student counseling program. Little Rock Junior College, Little Rock, Ark.

"Self-Inventory of Personal-Social Relationships" in the counseling program. (Manuscript.) Little Rock Junior College, Little Rock, Ark.

A guidance program for a liberal arts college. Macalester College, St. Paul, Minn.

Using upper-class students as house counselors. Macalester College, St. Paul, Minn.

A program of counselor selection and education. Macalester College, St. Paul, Minn.

Organizing dormitory life in terms of educative experience. Macalester College, St. Paul, Minn.

Vocational planning day. Macalester College, St. Paul, Minn.

Job analysis of counseling and housing personnel. Macalester College, St. Paul, Minn.

The Mac Counselor: a quarterly bulletin for counselors. Macalester College, St. Paul, Minn.

Development of a guidance program, particularly in readjustment of ex-service men to college environment. Vocational counseling. J. W. Jones, Northwest Missouri State Teachers College, Maryville, Mo.

A study of an adequate personnel and guidance program. W. F. Sanders, Park College, Parkville, Mo.

Complete study of faculty advisory program. C. W. Cannom, Park College, Parkville, Mo.

Student advisory system in residence halls. Madge McGlade, Iowa State College, Ames, Iowa.

Studying the program of guidance and personnel. Toward a theory of guidance. College of St. Catherine, St. Paul, Minn.

How can techniques employed in counseling students be applied to the problem of the foreign student on an American college campus? John R. Cottin, Fisk University, Nashville, Tenn.

Reorganization of student counseling and personnel program. Muskingum College, New Concord, Ohio.

A handbook for residence counselors. Mary Omer, Stephens College, Columbia, Mo.

Needs Studies of Students and Alumni

Social, economic, and educational background of needs of students. F. J. Holter, Hiram College, Hiram, Ohio.

Alumni background and needs. Harold E. Davis, Hiram College, Hiram, Ohio.

Student problem areas. A summary. Macalester College, St. Paul, Minn.

Vocations and cultural satisfactions of Macalester alumni. Macalester College, St. Paul, Minn.

Provision for the veteran in the Macalester postwar program. Macalester College, St. Paul, Minn.

Inventory on students' background, interests, health, etc. Lois S. Hays, Michigan State College, East Lansing, Mich.

Study of student needs. Mary R. Harrison, Park College, Parkville, Mo.

Questionnaire survey directed at social needs of students. Implications for extra-curricular life of the college. Pasadena Junior College, Pasadena, Calif.

A plan for studying maturity of interests of college women. W. P. Shofstall, Stephens College, Columbia, Mo.

Personnel Administration and Records

General revision of the personnel records and counseling procedures. Allegheny College, Meadville, Pa.

The Macalester personnel folder. Materials needed in counseling and how they are used. Macalester College, St. Paul, Minn.

Learning index based upon all available knowledge about students for possible use in counseling. Northwest Missouri State Teachers College, Maryville, Mo.

Development of a more centralized records system. C. W. Cannom, Park College, Parkville, Mo.

Development of the services of the personnel office. Talladega College, Talladega, Ala.

Development of a student self-appraisal form for use in student personnel and counseling. Henderson A. Johnson, Fisk University, Nashville, Tenn.

Centralization of personnel records. Communication laboratories including interpretation of test data to freshman students. Muskingum College, New Concord, Ohio.

The Superior Student

"Honors Work" in upper division to provide for superior students. Frank Dickinson, University of Denver, Denver, Colo.

Academic achievement of scholarship students. Hiram College, Hiram, Ohio.

A training school for officers of campus government. Macalester College, St. Paul, Minn.

An evaluation of honors work. W. F. Sanders, Park College, Parkville, Mo.

Research in Student Personnel and Counseling

Investigation of the personal qualities that make for success or failure in the teaching profession. Ralph Noyer, Ball State Teachers College, Muncie, Ind.

Teaching Materials Service: courtesy and social usage. Ball State Teachers College, Muncie, Ind.

Multiple correlations of psychological test scores, high school academic records, and college grades. J. S. Karslake, Hiram College, Hiram, Ohio.

Study of distribution of grades. Laurence D. Underwood, Hiram College, Hiram, Ohio.

Analysis of administration of Washburne Social Adjustment Inventory. Laurence Whisler, University of Louisville, Louisville, Ky.

Student self-analysis. C. F. Virtue and N. H. Kelley, University of Louisville, Louisville, Ky.

Evaluation of student aid program. Macalester College, St. Paul, Minn.

Evaluation

Improved procedures in examinations and testing. Aileen G. Dain, Allegheny College, Meadville, Pa.

Achievement (Qualifying) Examination Program. Antioch College, Yellow Springs, Ohio.

Organization of testing bureau, including all schools in the university. E. J. Allen, University of Denver, Denver, Colo.

Improvements in comprehensive examinations given at end of sophomore and senior years. University of Louisville, Louisville, Ky.

Evaluation of program of general education in the College of Liberal Arts. J. J. Oppenheimer, University of Louisville, Louisville, Ky.

Evaluation program to determine accomplishment in general education. James H. Hewlett, Centre College of Kentucky, Danville, Ky.

A testing program for the four-year liberal arts college. Kathern E. Montgomery, University of Louisville, Louisville, Ky.

Predicting achievement in the liberal arts college. Macalester College, St. Paul, Minn.

The Armed Forces Institute Tests of General Educational Development: a statistical summary of their administration to co-educational freshmen and sophomores. Macalester College, St. Paul, Minn.

The Macalester freshman testing program: a statistical summary. Macalester College, St. Paul, Minn.

Evaluation of the study. College of St. Catherine, St. Paul, Minn.

Course examinations and senior comprehensive examinations. O. T. Gooden, Hendrix College, Conway, Ark.

THE AMERICAN COUNCIL ON EDUCATION

GEORGE F. ZOOK, *President*

A. J. BRUMBAUGH, *Vice President*

The American Council on Education is a *council* of national educational associations; organizations having related interests; approved universities and colleges, technological schools, and private secondary schools; state departments of education; and city school systems. It is a center of cooperation and coordination whose influence has been apparent in the shaping of American educational policies as well as in the formulation of American educational practices during the past twenty-five years. Many leaders in American education and public life serve on the commissions and committees through which the Council operates.

The Committee on the Cooperative Study in General Education, appointed by the American Council on Education, began work in January 1939. Members of the Committee are listed on the page facing the title page of this book. The Committee operates through a staff under the supervision and control of a director responsible to the Committee.